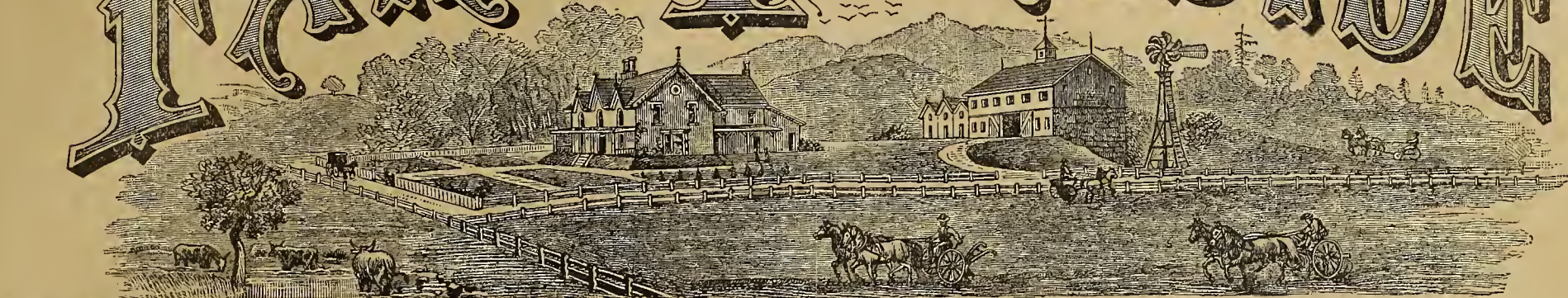


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FARM & FIRESIDE.



SIX EXTRA PAGES THIS ISSUE, WITH SUPPLEMENT.

EASTERN EDITION.

VOL. XV. NO. 13.

PHILADELPHIA, PA., and SPRINGFIELD, OHIO, APRIL 1, 1892.

TERMS (50 CENTS A YEAR. 24 NUMBERS.)

The Circulation of FARM AND FIRESIDE
this issue is

325,500 COPIES.

The Average Circulation for the 24 issues of
the last 12 months has been

267,912 COPIES EACH ISSUE.

To accommodate advertisers, two editions
are printed. The Eastern edition being
125,200 copies, the Western edition
being 200,300 copies this issue.

Farm and Fireside has More Actual
Subscribers than any Agricultural
Journal in the World.

Current Comment.

PENNSYLVANIA subscriber, who has
lived for many years in the heart
of the anthracite coal region, does
not like what was said recently in these
columns about the big coal combination.
He writes:

"Coal ought to advance at least twenty-five or fifty cents a ton. I use fifty tons a year. My coal would cost me \$25 more a year; but I would probably be benefited \$1,000 a year by the general prosperity around me. You, living at a distance, may think the combine wrong; but we who understand it, know it is right. And we don't think it will be wise for governors and legislatures to interfere with it. The people rule in this country, and they are satisfied with it, except the labor managers and a few others who live off the working people."

Presumably this correspondent is a merchant or business man who would be benefited by the general prosperity of the people among whom he lives, resulting from an advance in the wages of the coal miners. An advance in their wages would certainly be a good thing, and would help bring about that general prosperity he hopes for. But will the wages of the miners be advanced? It certainly does not follow from the fact that a "big deal" has been made that they will be. A great monopoly, having control of the production, transportation and distribution of anthracite, controls also the wages of the workmen it employs. It has the dangerous power of being able to oppress both the consumers and the miners of coal. Having the power, it will do whatever is to its own advantage, regardless of the rights and welfare of others.

The labor managers referred to are probably shrewd enough to see that there is little hope of the miners having their wages advanced by the combination. It is safe to say that the lion's share of the increased profits resulting from the combination will go into the pockets of the capitalists, and that the expected advance in wages of the miners will be a disappointment.

A bill legalizing the Reading coal deal has been railroaded through the New Jersey legislature. Passing over what is reported concerning political and financial influences used, the moral considerations said to have induced the members of the legislature to pass this bill were assurances that the price of anthracite coal is not to be advanced to New Jersey consumers.

Philadelphia papers assert that such assurances have also been made to Pennsylvania. Here we have the spectacle of a state legalizing a dangerous conspiracy to prey upon the citizens of other states.

And that is not all. Assuming that the combination keeps faith and does not advance the price of anthracite to New Jersey consumers, it has a way of increasing its profits from what is sold to them that seems to have been overlooked by the legislators. The combination can increase its profits on the coal sold in the state by reducing the wages of the workmen employed in its production and distribution.

It is, therefore, a conspiracy more dangerous to these workmen than to the consumers of coal.

A BILL to prevent double taxation has been passed by the lower branch of the Ohio assembly. The bill applies to mortgaged property. It provides that the holder of real estate encumbered with a mortgage shall, upon payment of taxes, be given two separate tax receipts. One of these shall represent the entire tax, and the other shall represent the amount of tax paid on the mortgaged portion of the property value. The mortgagor can then apply this latter receipt upon payment of the interest or principal of the mortgage as so much cash, and the mortgagee must accept it as such.

The object of the bill is very commendable. Although not perfect, it will afford borrowers, if passed, much needed relief. Under our present laws the holder of mortgaged property pays tax on the whole of it. Then the holder of the mortgage pays tax on that. But the mortgagee collects what he has paid from the mortgagor through increased interest. The borrower indirectly pays double taxation on all mortgaged property held by him.

AN Illinois congressman has introduced a bill in Congress to abolish the tariff on agricultural implements. The bill is of value only to politicians. It affords them an opportunity for much talk. American-made farm implements are the best in the world, and sell on their merits; progressive American farmers could not be hired to use the clumsy ones of foreign manufacture. The latest improved machines are nearly all protected by letters patent, so that the abolition of the tariff would have no effect on them whatever.

The *American Cultivator* says: "The bill that has been introduced into Congress, to allow the admission of foreign-made agricultural implements into this country free of duty, has a twofold purpose: To curry favor with the farmers and obtain a few votes from them, and to show spite against certain manufacturers. Should it pass, it would probably result in the shipment of a few tools or machines here which would not be bought by intelligent farmers, or even used by them as a gift, although some of the lately-arrived citizens might purchase them because they had been accustomed to them. Almost without exception European agricultural implements are heavy, clumsy, and what a farmer would call 'man-killers and horse-killers.' This is the verdict of those who have seen them in use there, and the newly-arrived immigrant is always surprised at the light weight and perfect finish of the tools he

is put to using here, if he goes upon a farm. He almost fears to use them, lest they should break too easily, and they seem almost like toys when he compares them with those he was accustomed to use at home. He might prefer the old ones until he had learned that weight neither added power nor durability, but a few months use teaches him that he can do much more, and exert less strength, when using the Yankee patterns."

IN reply to a query by a subscriber about the profits in manufacturing, we would say that as reliable statistics as were ever published on this subject were collected by the chief of the bureau of labor of Massachusetts. Under his direction experts examined factories that turned out over three fourths of the manufactured products of Massachusetts. In his report is a summary of the results of the investigation, which shows that the selling price of manufactured articles is made up as follows:

| | |
|--|-------------|
| Raw material..... | 59 percent. |
| Wages..... | 22 " |
| Salaries..... | 2 " |
| Interest on borrowed capital, depreciation in value of plant, selling expenses, etc..... | 9 " |
| Incidentals, such as taxes, insurance, rent, freight, etc..... | 4 " |
| Profit on capital invested..... | 4 " |

It is well to bear in mind that the larger part of the raw material mentioned in this table also represents labor. The iron, wood, wool, leather, etc., used by the factories and designated as their raw material, have all had more or less labor applied to them. The investigations do not confirm the common opinion of the immense profits in manufacturing. The large profits known to be realized from a few lines of manufacturing are offset by low profits in many others.

THE special attention of our readers who are cotton growers is called to an article in this issue entitled "Cotton Depression—The Cause." It will be followed in the next issue by "Cotton Depression—The Cure." The first article graphically describes the deplorable situation of the cotton growers; the second clearly points the way out.

Wheat growers and corn growers can also read these articles with profit. To them the recent history of cotton growing in this country is a valuable object lesson warning them against the fate that has overtaken and almost overwhelmed the cotton growers. Overproduction in wheat and corn will surely put them in the same situation. If they do get into the same situation in which the cotton growers are now, they can get out by the same road; but it will be far better for them to take warning and not get in.

ACTING promptly in compliance with the decision of the supreme court of Ohio, and in deference to public opinion, the Standard Oil Trust has been dissolved by its stockholders. Nominally, the greatest of all trusts has ended. The reality, time alone will show the public. The trust is powerful enough to exist without a name. Whether the stockholders who own the controlling interest in each of the several state companies will continue the business of the Standard Oil trust under private agreements, or whether they will water the stock to the second or third dilution, put it on the market and unload it on a confiding and envious public, remains to be seen.

As we are constantly receiving letters from our subscribers asking for information about farm machinery and various things used by country people, we have decided to publish a Directory of reliable manufacturing firms. Hereafter this Directory will be one of the regular features of FARM AND FIRESIDE. Those whose addresses are in the Directory have been selected with the greatest care as to their reliability and good standing, and they are among the best firms in their business. And as this Directory is enlarged from time to time, the additions will be only such firms as make the best goods and are known to be reliable.

If you think of buying a plow, a binder, a buggy or anything in that line, turn to page 6, and see if the Directory cannot give you the address of the makers of what you want. Though many of them sell to farmers only through agents, all are glad to furnish catalogues or information about their goods to all probable buyers. We desire this Directory to be of practical value to our subscribers, and shall study to improve it in such ways as to increase its usefulness.

THE Paddock pure food bill has been passed by the United States Senate. It provides that foods and drugs exposed for sale in any state or territory other than that in which they were prepared or manufactured, shall be examined by experts of the food section of the chemical division of the department of agriculture. The introduction of adulterated foods or drugs from one state to another is made a misdemeanor, punishable by fine and imprisonment.

The manufacture and sale of adulterated and fraudulent foods and drugs is a crime against humanity that is on the increase. The laws of some states against it are stringent enough, but they are not enforced. It is high time something more was done to bring the criminals to punishment. Whatever objections may be made to the expediency of a national law against fraud in foods and drugs, it will certainly be admitted that its object is right, and that the people will be benefited by its rigid enforcement.

THE farmers of the present day would hardly undertake to raise wheat without the use of improved seeding, harvesting and threshing machines. They could not afford to go back to the use of the flail, the cradle and the three-cornered harrow. But in most parts of the country we still find in vogue the old, laborious and costly methods of building and repairing the public roads. This need not be. American inventive genius has furnished us with improved road machinery, the use of which greatly cheapens the cost of building and repairing roads. And it is now cheaper and better for a community to buy and use improved road machinery and get good roads than it is to do nothing and have poor roads.

RECIPROCITY is to be tested in another way. By proclamation of the President duties are to be reimposed on the sugar, coffee, hides, etc., imported from Venezuela and other countries that have not made commercial treaties with the United States under the provisions of the tariff act of 1890. This is the first instance where the retaliation part of reciprocity has been put into action, and the effects will be watched for with interest.

FARM AND FIRESIDE.

ISSUED 1st AND 15th OF EACH MONTH BY
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letter of renewal.

We have an office at 927 Chestnut Street, Phil-
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letters to the office nearest to you and address

FARM AND FIRESIDE,
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The Advertisers in this Paper.

We believe that all the advertisements in this paper
are from reliable firms or business men, and do not in-
tentionally or knowingly insert advertisements from
any but reliable parties; if subscribers find any of
them to be otherwise we should be glad to know it.
Always mention this paper when answering advertise-
ments, as advertisers often have different things ad-
vertised in several papers.

Our Farm.

COTTON DEPRESSION—THE CAUSE.
No. 1.

THE past year was an exceptionally
favorable one for farmers in all
branches of agriculture, with the
exception of the cotton planter.

A magnificent harvest of cereals
was accompanied by compar-
atively high prices;
meats have advanced

in value; fruit was plentiful, with a fair
return of profit, and there was a general
recovery from the era of low prices
and hard times. In this prosperity,
however, the cotton planter has no share.
Prices have steadily declined during the
past year or more and with an ac-
celerated ratio during the last few
months. At the close of January, the
Liverpool price of standard grades of
the American product was two cents lower
than a year ago, and four cents below the
quotation of 1890 at the same date. In
no branch of our agriculture has the mar-
gin of profit been smaller during recent
years, and a falling off of twenty-five per
cent in two years means the difference
between profit and loss. Growers declare,
and the facts seem to warrant the declara-
tion, that the crop is produced at a loss
when the farm price falls much below eight
cents, and yet to-day good middling is
selling in New York one half a cent be-
low that, while the plantation offering for
all grades hovers around six cents. This
condition of affairs is intolerable, and
carries with it a threat of widespread
financial disaster and bankruptcy in the
South. The financial position of the
average cotton planter at best is not
strong, and with actual loss on every
pound produced staring him in the face,
his situation is critical.

It is a weakness of human nature, to de-
sire to shift the responsibility for personal
failure to other shoulders. The deity
bears many of the burdens of the shiftless
cultivator, whose luck runs to weeds
rather than to grain. When failure comes
the responsibility is assigned to every-
thing except lack of personal enterprise
or ability. Cotton growers are now
ready to assign their troubles to every-
thing except the right cause. The spec-
ulator is denounced justly to a very lim-
ited extent; the monetary circulation is
charged with causing the depression;
transportation companies, middlemen,
money-lenders are inveighed against;
even a tariff of one cent on cotton-ties,
amounting to, perhaps, six to eight cents
on a bale of cotton, is gravely charged
with having reduced the industry to its
present straits. No personal responsi-
bility is accepted, and yet cotton growers
themselves, and they alone, are to blame
for the situation.

The demand for cotton for consumption
has shown wonderful flexibility during
recent years, increasing throughout the
world much more rapidly than popula-
tion, but cotton planters have not only
kept in advance of the demand, but have
managed to get farther and farther ahead
of it. This growing surplus has borne
prices down to the present unremun-
erative level. In the face of this
annually increasing surplus, prices were
well maintained until during 1890, when
the cumulative effect began to be felt.

In 1882 the cotton crop of the world
amounted to 10,159,200 bales, of 500 pounds
each, a supply which was ample for the
demands for consumption, but not suffi-
ciently large to break the market. Values
were remunerative, and cotton growing,
while not a road to rapid wealth, was a
paying industry. The export price was
then about eleven cents, and the Liverpool
price something like twelve cents. This
profitable balancing of supply and de-
mand continued until 1886, when the
American crop was increased more than
three quarters of a million of bales in a
single year, while Liverpool prices re-
sponded by falling off two cents. This
was not enough, and American planters
brought out a crop of nearly 9,000,000
bales in 1890, and followed that with an-
other largely above 8,000,000 bales last
year. Prices have followed in inverse
ratio, and now Liverpool quotes middling
upland at 8.3 cents. In 1890 the world's
crop was not less than 14,000,000 bales of
500 pounds, an increase in nine years of
40 per cent. In the same period the
Liverpool price fell off between 35 and 40
per cent. For purpose of comparison, the
crop of the world, which enters commer-
cial channels in 500-pound bales, for the
two periods is presented:

| | Bales (1882) | Bales (1890) |
|--------------------|--------------|--------------|
| Brazil..... | 240,000 | 291,766 |
| Egypt..... | 500,000 | 757,485 |
| India..... | 1,960,000 | 2,404,202 |
| United States..... | 5,628,000 | 8,632,088 |
| Total..... | 8,328,000 | 12,085,541 |

About 2,000,000 bales are grown in Japan,
China, Africa, etc., but none of it gets in-
to civilized commerce.

Here is an increased commercial supply
of 44 per cent in nine years, the increase
in American cotton amounting to nearly
54 per cent. The fall in prices shows that
the demand has not kept pace with this in-
crease, but the fact may be emphasized by
a still stronger showing. The actual fac-
tory consumption in Europe and this
country for the five years, 1881-5, averaged
3,655,700,000 pounds, while for the period
1886-90 it averaged 4,120,600,000 pounds.
The increase in consumption between the
two periods was 14 per cent. When it is
remembered that the enormous increase
in production during ten years has been
mainly in this country and largely con-
fined to the last four years, the failure of
consumption to absorb the supply and
the cumulative effect in depressing values
can be appreciated. The average con-
sumption for the past six years equals
8,430,100 bales of 500 pounds, or, allowing
1,000,000 bales for local consumption in
India, a consumption from the cotton of
civilized commerce of 9,430,100 bales,
while the total production for 1890 alone
amounted to 12,085,541 bales. This gives,
as the result of one year's harvest, a sur-
plus beyond requirements of 2,600,000
bales, or nearly one fourth of the crop.

The only thing remarkable in this last
break in prices is the fact that it has been
so long coming. Conditions justified it a
year ago, and yet it might have been
averted even after the 1890 crop of 8,900,-
000 bales. It came with the certainty of
another crop above 8,000,000 bales for 1891.
On September 12, when the new crop was
beginning to move, the standard grade in
New York was worth 8½ cents. Month
by month it has fallen until it has reached
7½ cents. The new crop is simply being
added to the surplus already on hand
above requirements. The world's visible
supply of cotton at the close of January,
with the proportion of that supply com-
ing from this country, and the Liverpool
price of American cotton is thus shown:

| Year. | Total Supply. | U. S. Cotton. | Liverpool Price. |
|-----------|---------------|---------------|------------------|
| 1892..... | 4,512,000 | 4,098,000 | 8.3 |
| 1891..... | 3,484,000 | 2,852,000 | 10.2 |
| 1890..... | 3,014,000 | 2,546,000 | 12.2 |

In a year the visible supply has in-
creased 32 per cent, and the price has
fallen nearly 20 per cent. The present
low price is the logical result of the course
followed by American planters. The in-

creased production beyond the require-
ments for consumption has been almost
entirely made in this country. The law
of supply and demand controls, and until
the two are nearer together, the price of
cotton will rule low. Finances, tariff,
speculation or middlemen may be made
targets for the planter's wrath, but the
fault lies with growers themselves. An
extension of cotton area from 14,500,000
acres in 1880 to about 20,000,000 acres in
1890, is unnatural, unnecessary and re-
sponsible for the present condition of the
industry.
B. W. SNOW.

[To be concluded next issue.]

SOME SUGGESTIONS FOR OUR EXPERIMENT
STATIONS.

BY JOSEPH (TUSCO GREINER.)

I am not an habitual fault-finder, I hope.
Especially do I dislike to find fault with
the agricultural experiment stations.
Some of them do admirable work, and
are of great help to farmers and farming
interests generally. On the other hand,
we should expect to get some returns for
the money that they receive out of the
public treasury every year. This amount
is not inconsiderable—about 40 times
\$15,000, or \$600,000. It seems to me that
quite a good deal could be accomplished
with such an amount. The sum looks
big to me. I am dabbling a little in
experiments myself, but I am so situated
that I must make these experiments self-
supporting; I cannot afford, for instance,
to put up costly greenhouses, to compare
methods of heating or different systems of
construction, etc. I must work in a
modest way, and yet think I can accom-
plish something, even if but little. Each
of these stations spends \$15,000 every
year. Do we get our money's worth of
information? Sometimes I think many
of the stations solve at least the problem
how to accomplish the least with the
greatest possible expense. A number of
them are hardly ever heard from. The
meager results in general, however, are
not so much the fault of the individual
station officers as of the whole system, or
rather lack of system. Every station
starts out on its own hook, and goes on
testing and analyzing and experiment-
ing entirely independently, and without
the least regard to the doings of all the
other stations. Thus we have five or ten
or fifteen of the stations doing the same
work over again, and wasting large sums
of money and considerable effort in use-
less repetitions. Many of them exhaust
much of their substance in tests of vari-
ous fertilizing materials, or of vegetable
and fruit varieties, which work might
as well be left to private growers and ex-
perimenters. The testing of varieties is a
matter almost too local in its value and
application to be legitimate work for the
stations. Much more good could be ac-
complished, no doubt, by the stations if all
were working under a central manage-
ment, and according to a well-arranged
plan and system, each in certain lines,
than in the present loose, unsystematic
manner. Voluntary co-operation of the
stations might make some improvement.

One of the difficulties the stations have
to face is the scarcity of efficient help.
The young men just from agricultural
colleges, who are usually called to fill im-
portant positions on the station staffs,
have no practical experience, and but
little idea of the real needs of the practical
farmer. Persons who combine originality,
practical experience and literary talent
are, unfortunately, quite scarce; just these
men are needed, yet are seldom available
at the salaries which the stations can pay.
While it is true that the public should
have a great deal of patience, that val-
uable new truths are not discovered over-
night, that it takes time to evolve and
bring out these new points, and that
we are after them, and not merely after
a lot of literature, in bulletins or other-
wise, yet the lessons, as they are evolved
from the current experiments, might be
presented in a much more impressive and
readable form than is done in the major-
ity of station bulletins. Some of these
publications are absolutely and utterly
worthless, without any practical points
and without usefulness to the practical
farmer, and most of them are edited in
an abominable manner. Often we cannot
make out head nor tail to it. In many
of these bulletins I am unable to find a
single point worth mentioning or com-
menting upon in the rural press. Pre-

cious few of them are even readable.
Why is this? There is ample room for
improvement. Reading matter intended
for the ordinary, average farmer should
be presented in plainest language, and in
comprehensible style and arrangement.
This is seldom, very seldom done. A
good summary should always be given,
and this is done only in a few of the bul-
letins.

I am sure all the station people wish to
make themselves useful to farmers, and
are willing to do everything in their
power toward this end. My remarks
may prove helpful to them, and are
offered as suggestions rather than criti-
cisms. I think, for instance, very highly
of the Ohio station and its work. The
regular bulletins coming from that station
are among the most interesting and val-
uable of all station bulletins, and it would
seem ungrateful to offer criticisms. Still,
I cannot suppress a friendly suggestion.
On the table before me are two "news-
paper bulletins" issued by the Ohio
station. They are a kind of summary of
bulletins, and intended to serve as "copy"
for the agricultural press, and to diffuse
in the most effective manner the results
of important experiments made at the
various stations. The idea is admirable
and commendable, and the Ohio station
deserves all praise and credit for this
work. But the execution is less praise-
worthy. In fact, some of these news-
paper bulletins are edited so carelessly
that they are utterly worthless.

Newspaper bulletin No. 47, for instance,
contains a summary of an experiment in
lamb feeding made in 1890 and 1891, by
the experiment department of the Ontario
Agricultural College, at Guelph, as reported
in bulletin No. 49. Some of the most im-
portant data, however, are left out,
especially the figures showing cost of
lamb and profit, if any, in the transac-
tion. A more serious defect, one which
makes the whole information given in it
utterly worthless, is found in bulletin
No. 78, which gives summary of a ferti-
lizer experiment made by the Georgia
station. The respective amounts of fer-
tilizing materials and their cost, as well
as the returns in money, are given quite
in detail, but there is not a word to indi-
cate what crop was grown on the land.

On the whole, also, it is pretty plain
that it is nothing more nor less than a
mere waste of effort and money to make
and report these tests of fertilizing sub-
stances, since they can in no way serve as
a guide to others. Each farmer has to
make them for himself, and for almost
every separate field. The best the sta-
tions can do is to teach farmers how to
make such tests, and what conclusions to
draw from the results. A mere report of
such tests, no matter by whom made, has
no practical value.

BORDEAUX MIXTURES.

I must take exceptions to some of Mr.
Grenier's statements in February 15th
FARM AND FIRESIDE, concerning Bor-
deaux mixture. He says that it is trouble-
some to make, troublesome to apply and
quite expensive. If he means the old for-
mula Bordeaux mixture, these charges have
some force; and no doubt this is what he
refers to. The formula of this mixture
calls for six pounds copper sulphate to
twenty-two gallons of water; but it has
been found that one fourth this strength
will answer the purpose. This reduces the
cost so that it is now the cheapest of all
fungicides, and dilution does away almost
entirely with the clogging of the nozzle.
What is most surprising about his state-
ments, however, is the claim that the am-
moniacal solution of copper carbonate is
just as good as the Bordeaux mixture.
Possibly some experimenters have ex-
pressed the belief that copper carbonate
would supplant other fungicides, but
I am not aware that it has done
so. The testimony is almost univers-
ally in favor of Bordeaux mixture
over all other fungicides, in point of ef-
ficiency. The old formula Bordeaux mix-
ture has faults, but experimenters are
agreed that it is efficient, and that copper
carbonate has not fulfilled expectations.
It is easy to make and easily applied, but
in many cases it has partially failed, and
it has always come out behind Bordeaux
mixtures when the two were tested along-
side; at least, I do not recall a case to the
contrary.

I am willing to admit that copper car-

bonate has value as a fungicide, and can hardly be dispensed with for the later sprayings of grapes and for the last applications on some other fruits, but I would limit its use to such cases as do not admit of Bordeaux mixture and use the latter wherever admissible. There are, however, very few cases where Bordeaux mixture cannot be used, and as before stated, both cost and trouble can be lessened by reducing the strength.

We tested these and other fungicides for apple and pear scab, as well as other fungus diseases, the past season, and not only because of greater efficiency, but for other good reasons, we unhesitatingly gave our preference to dilute Bordeaux mixture; that is, four pounds each of copper sulphate and quicklime to fifty gallons of water.

Mr. Grenier says that the Bordeaux mixture leaves a stain upon the fruit, and this is because it sticks. That is just the point; we want something that sticks, so that it will not wash off too easily. We are not compelled to keep on using it until the fruit ripens. Experience soon teaches when to stop using it. For late varieties of apples and pears and all varieties of quinces, there need be no fear that the mixture will stick until the fruit is ripe, as the last application is made in June; and in case of the early varieties, make no application later than the middle of May, or but one after the time of blooming. It is necessary to be a little careful, and not to continue spraying plums, cherries and grapes too late; but there is no need of substituting copper carbonate for Bordeaux mixture except in the case of grapes and possibly plums.

Mr. Greiner seems to have overlooked one quality of the Bordeaux mixture that makes it superior to all other fungicides; in fact, renders it indispensable; that is, it is the only one that can be used in connection with Paris green or London purple. Paris green and London purple are liable to injure the foliage of trees of all kinds, and especially plum and peach, and when used in any mixture containing ammonia the danger is increased. With Bordeaux mixture, either strong or diluted in combination with the arsenites, the danger of injuring foliage is almost wholly obviated.

Spraying with this combination mixture is effective in preventing the work of the curculio on plums, pears and peaches, and it prevents the premature leaf-dropping of the plum and pear; nor does it harm the foliage. Without this combination we must resort to jarring or spraying for the curculio, and in addition, use some fungicide to prevent premature leaf-dropping. These and other reasons lead me to believe that we are not yet ready to dispense with Bordeaux mixture, but I agree with Mr. Grenier that we have had enough of the old-style mixture.

W. J. GREEN.

SWEEPINGS OF THE MOWS.

The hay in the great mows is growing lower every day—disappearing like late banks of snow under the rays of the sun. There was a compact, warm, almost cozy appearance in the barn in the fall when the hay and fodder hid every rafter and beam, and ran over the sides of the mows, and bulged out of scaffold floors so that for several days hay enough was secured for the stock by trimming the mows, raking down the front of each.

And how smooth and substantial they appeared! Every spear laid straight, like a man's back hair. And the hay, if it was cut at the right time, has in mass a sheen or gloss that glistens when the sun strikes it aslant from window or skylight. It was good to see the mows filled with such masses of hay, and every one combed the same way. The farmer took pride in showing to friends, and well he might; it was his winter bank, all this store, on which he drew all winter for his milk, butter, cheese, beef and mutton.

During the winter, how carefully the farmer has noted the fall of the hay in the mows. A year ago this beam was not in sight on the first day of February, but this year the hay was three feet below it. That revealed several things. If the hay was stored with usual compactness, if the same number of animals have been fed, then more has been consumed. Why? Perhaps the weather made a difference in the appetite of the animals, or perhaps the hay, as is often the case, had not so much pith and substance as during the

previous year. And as a result of this discovery, came the question, "Shall I have hay enough to last till grass time, or must I buy?" The farmer has the dates of the former appearance of every beam, and can look ahead. If hay is to be bought, he knows before the time comes, can look around, attend auctions and make bargains.

But the bays are low now, and soon only chaff and seed will hide the bottom. What will you do with the sweepings of the mows? Some farmers will throw it on the manure pile. The worst possible use of it, unless it go to the horse manure and in it be burned up, for it contains countless seeds that will spring up where they are not wanted.

Do not use it to "bed down" with anywhere, desirable as it may be for the purpose, for the result is the same. Burn in the kitchen stove if there be no use for it, for thus a million weeds may be killed at one blow. But there may be use for the seed. To young chicks, just beginning to scratch for what they need, the seed is exactly adapted.

Did you ever place a brood of chicks, just beginning to take an interest in life, in a streak of sunshine and give them something to scratch? How their feet flew, and how they "sang," or chirped, in perfect contentment. Give them the mow sweepings. Put in barrels and save for them. It serves a double purpose; it gives food and exercise. If there be canaries in the house, give them a handful.

GEO. APPLETON.

FERTILIZER FOR POTATOES.

If, among the many kinds of animal manure produced upon the farm, such as that of swine, poultry, cattle, horses or the human family, there is one that seems better adapted to the growth of a special crop than any of the others, that is the one that should be used. In applying this principle to growing potatoes, the matter possesses deeper interest for the reason that the potato crop is one that is affected more seriously by adverse conditions than many other crops. If they grow under size or rough—scabby, as it is more generally called—their value as a merchantable product is very much lessened.

Good-sized, good-shaped and smooth tubers are those that find a ready sale at the best market price.

Such being the case, the question arises, does the fertilization of the crop exercise any influence in the growth and the character of the tubers? It must be admitted, in the first place, that the soil may affect to some extent the character of the crop, but when one sees what must be acknowledged to be a marked effect in the use of a particular kind of manure, and that similar effects are produced upon all varieties of soil, there is an irresistible tendency to faith in the use of that kind of manure. Our experience in the use of horse manure for the potato crop has led to the irresistible belief that, all things considered, it is the best fertilizer that can be used. We have used it under every conceivable condition, in the planting of a general crop, and in experimenting with it, side by side with other manures, and in every instance it came out ahead in the production of tubers of good size and smooth, while with other kinds of manure or high-sounding phosphates, the crop, in its marketable character, might be said to have been a failure. In some instances the results have been very marked; as, for instance, we planted a patch that had been devoted to the raising of onions for a number of years, using a very highly-recommended brand of potato fertilizer from a manufacturer of high reputation, applying liberally, and yet we harvested a very unsatisfactory crop, both as to size and smoothness. The next season we planted the same piece, but made a liberal application of horse manure, with the result that we harvested a large crop of very large and fine tubers, entirely free from scab or roughness.

If the question was to be asked how we knew it was the result of the manuring, we could only say, we believe it to be so, because it has so universally prevailed whenever we have used horse manure, and hence the conclusion becomes irresistible. And further, we cannot call to mind a single instance of failure, so that our faith in the great value of horse manure as a fertilizer for potatoes must remain unshaken.

Connecticut.

WM. H. YEOMANS.

RAISING COLTS BY HAND.

Some very famous horses have been brought up by hand on cow's milk. Probably the most noted of such was George Wilkes. It sometimes becomes a necessity to adopt this method of raising them, owing to the death of the dam. By taking a foal from its dam when very young, and bringing it up by hand, the milk of the mare can be dried and she can be trained for the track the same season she raises a foal. There is often a great advantage in this, particularly in the case of very valuable mares.

A correspondent of an exchange, who has had some experience in this business, gives his method as follows: "In the case of a colt only three weeks old which it was found necessary to raise by hand, fresh cow's milk was fed, at first diluted about one fourth with water and sweetened at the rate of one tablespoonful of sugar to the quart of milk.

"It was difficult to get the little fellow started to drinking; or rather it was started to suckling, for the finger was used during the first month. In two or three days, however, he took the milk with a relish, and for the first couple of weeks, was fed at 4:30 and 10 A. M. and 12:30, 3, 6 and 9 P. M., a pint or less being given at the start.

"This amount was gradually increased, and the number of meals cut down in proportion, until at the end of a month only three meals a day were given. The little fellow soon began to eat oats, and was given all he wanted from the start, with a little oil-meal added. The milk was not diluted or sweetened after the first month.

"After it got used to its new diet this colt grew right along, and is as good a colt as any of the others of same age that sucked. The colt did nicely, and seemed healthy all the time, the oil-meal fed having the same effect as flaxseed. He almost got into the disgusting habit of sucking wind before I noticed it, from being alone in a stall, but was immediately turned with other colts into the pasture, and having company to play with and something to eat always before him, stopped the wind-sucking before the habit became fixed. Keep a close watch on the bowels and have colic medicine handy."—*American Horse Breeder.*

CROSSING AND HYBRIDIZING.

Let me invite your attention to the purposes of cross-fertilization, as has been admirably stated by Darwin, Fuller and others. The results sought in cross-fertilization of varieties, or the hybridization of species, are various; but the principal one is to produce something different from either parent. Sometimes we may aim to increase the size or change the color, texture, flavor, or other characteristic of a fruit; or the size, form and color of a flower or the habit of a plant. Adaptation of the various species and varieties of cultivated plants to specific conditions is another and often important subject sought in producing cross-bred plants. There are many species, and occasional varieties, which have been so closely inbred in their native habitats or elsewhere, that they have acquired a fixedness of character, which removals to other localities and subjection to widely different conditions fail to effect any material change in their offspring; but by crossing and the introduction of new blood or elements, the foundation of generation—as it may be termed—is broken up, and wider deviations from normal types soon follow. It may sometimes even be necessary to introduce an undesirable element in order to force a plant to break away from its typical form, but when we have succeeded in this it is not generally difficult to get rid of the undesirable characteristics by careful selection. Then again, we cannot know in advance what will be the result of crossing any two plants of the same genus or species, for even the mingling of two inferior elements may result in the production of one superior of either of the originals. Still, we would not advise using inferior materials in preference to superior, except when it is absolutely necessary to effect a desired variation, as may sometimes occur when a person has but a limited number of a species or variety with which to experiment. A wilding may possess some very desirable properties, such as vigor, hardiness and exemption from disease, while its domesticated representative lacks one or all of these properties; so by combining the

best elements of the two a new and superior progeny may be produced. We may, among fruits, secure size, color and texture; in fact, all the good qualities known to belong to or exist in a certain species, and still these will be of little value unless the plant itself is adapted to the soil and climate where it is cultivated. One variety of the plant may be more hardy, and safely endure many degrees lower temperature than another of the same species, but no amount of nursing or moving about will ever change a tender plant into a hardy one. But by introducing new elements, as in cross-fertilization, we may multiply the causes for wide variation through the different hereditary characteristics of both parents. "Why the seeds of plants should yield both tender and hardy varieties can only be accounted for upon the hypothesis that each possesses hereditary transmitted characteristics; but what the nature of the laws are that control this transmission we know little or nothing. We can form no conception why the advantage from a cross is directed exclusively to the vegetable system and sometimes to the reproductive system, but commonly to both. It is equally inconceivable why some individuals of the same species should be sterile, while others are fully fertile with their own pollen. Why a change of climate should either lessen or increase the sterility of self-fertile species, and why the individuals of some species should be even more fertile with pollen from a distinct species than with their own pollen, as with many other facts, so obscure that we stand in awe of before the mystery of life.—*John Craig, Horticulturist Dominion Experimental Farm before Committee on Agriculture, House of Commons, Ottawa.*

PEDIGREE BREEDING.

In order to perpetuate the good qualities which, by the skill of the breeder, have been engrafted upon the natural condition of a breed of animals, it is indispensable that the same discriminating judgment in the selection and management of breeding animals be continually exercised to prevent deterioration.

We often hear it said that certain breeds of animals have been so long and carefully bred that their acquired qualities have become permanently fixed, and the impression is conveyed that their present condition will be maintained if left to themselves. This is a grave mistake, and many an unsuccessful breeder can safely attribute a great portion of his "ill luck" to the fact that he has acted upon this erroneous opinion. F. L. H. Carroll, Md.



Mrs. Jennie Bigelow of Fremont, Mich.

Swellings in the Neck

Or Goitre, Permanently Cured.

One of the most stubborn forms of Scrofula is that of goitre, which is not only a very distressing disfigurement of the face and neck, but causes great anxiety, because it is liable to develop into the painful and sickening running sore. Hood's Sarsaparilla has been

Wonderfully Successful

in cases of this kind. Acting promptly upon the blood, it eliminates all impurity, and the swelling, thus deprived of its cause and support, soon disappears. Read this:

"To C. I. Hood & Co., Lowell, Mass.

"I suffered terribly with swellings in my neck, or goitre, and spent an enormous amount of money for medicines, but to no purpose. I became completely discouraged. I read about Mrs. Anna Sutherland, of Kalamazoo, Mich., who had goitre, and who was greatly benefited by Hood's Sarsaparilla. I wrote to her to learn additional facts, and received an answer fully confirming the printed testimonial. I then commenced to take Hood's Sarsaparilla myself, and when I had taken two bottles found that my neck had been reduced in size two inches. I was so anxious to know the effect of the medicine that I used a tape measure every day. In a few weeks I found the swelling very much reduced, and I could Breathe with Perfect Ease, which I had not done for years. I continued with

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Our Farm.

NOTES FOR THE HOME GARDEN.

BY JOSEPH.



CURRENTS AND GOOSEBERRIES.

—The acid of currant sauce is very gratifying to my taste during the winter. It appears to be especially wholesome also, at least in my individual case. Other people, too, seem to like this fruit, as shown by the fact that it always sells well at paying prices. It is not necessary to grow the newer "fancy" kinds, like Fay's, or even the older Cherry currant. The old white and red Dutch are as reliable as any other, and good enough for home use, although Fay and Cherry bear larger berries. American home gardeners do not appreciate the currant as much as it deserves, and they should raise enough of it to supply all the family may need. It is easily grown. All you have to do is to start the plants from cuttings, and give them half-way fair treatment, and they will soon reward you with plenty of fruit. But don't let the weeds choke out the bushes, nor the worms eat them up. Cultivation and hoeing will dispose of the weeds, and a little white hellebore or tobacco dust, or fresh wood ashes, dusted over the plants, or the kerosene emulsion, or solutions of muriate of potash, or buhach water sprayed upon them, will kill the worms. The whole matter is extremely simple. Use the bushes well, and they will use you well by giving you plenty of fruit. If you have no bushes in your garden now, by all means plant some. Nurserymen sell them quite cheaply. But don't fool time and money away with the Crandall currant. It isn't worth the place you give it. In short, it is unreliable, and the plants, as a rule, are not productive. Even if the fruit were better than it really is, it could not be recommended for general planting.

I am also very fond of gooseberries, both cooked while yet immature and fresh while ripe. Few people in America know what a really delicious sauce can be made of green gooseberries, by simply stewing them and adding a little sugar. To my notion there is hardly a more palatable dish than a good omelet with gooseberry sauce. The ripe fruit is also quite acceptable to my taste, and the trouble has been mostly that we could not succeed in ripening the finer, larger foreign varieties on account of their liability to be attacked by mildew. Now that we have a sure preventive of this disease in sulphide of potassium, dissolved at the rate of one half ounce in one gallon of water, we can plant the Triumph and Industry and other large English varieties with good prospects of success. The bushes should be sprayed three or four times during the growing season. On the whole, I think the gooseberry, like the currant, is a fruit that belongs in every home garden.

AN EARLY START.—There is no need of being too fast about planting the garden. As long as the ground is wet, and will not pulverize nicely, let it alone and confine your operations to the hotbed or cold-frame. But just as soon as the soil will crumble, and allow you to work it into a nice, mellow seed bed, go at it, and put in the seed of hardy peas, radishes, lettuce, onions, carrots, beets, etc. The sooner this is done, the sooner you will have new vegetables on your table.

EARLY POTATOES.—We should not be afraid to risk planting a few early potatoes quite early. In nine cases out of ten they will come out all right, even if planted long before we are safe from night frosts. Potatoes are never better than when they first mature. An Early Ohio in July, when nicely baked, is a delicacy to me, and I cannot get them ripe too early. Plant in warm, well-prepared, rich soil. It cannot be too rich. And if you wish to take some extra pains, start a few tubers in hotbeds or cold-frame, or in a warm, light room. Do not cover them unless you start them in pots. When the thick, dark-colored sprouts have grown an inch or so long, the weather has become a little warm, and ground in shape for planting, plant the halved tubers carefully, twelve inches apart in the drills, covering about three or four inches deep. Should frost threaten after the potatoes are up, cover up the plants with soil, or throw a little

hay or straw over them at night, and leave it on until the period of danger is past.

A paragraph going through the agricultural press recently tells of Mr. J. J. H. Gregory, that he "sometimes uses unleached wood ashes, but never directly in the drills, as they make the tubers scabby, while muriate of potash will not have this effect, even if 600 pounds to the acre are applied in the drill. It makes flattish kinds of potatoes thicker. Ashes do better if applied in the fall."

Ashes are a good fertilizer for potatoes, and may be applied in fall or spring; it makes very little difference when. But do not put excessive doses into the drills. The best way to use them is to apply broadcast as a top-dressing. The plant foods in ashes, especially the potash, are so readily available, that spring application will give about as good results as fall application. But don't imagine you can always apply heavy dressings of muriate of potash with impunity. If applied at the rate of 600 pounds to the acre, even broadcast, you may ruin your crop, and make the few potatoes that you will get so scabby that they are worthless except for feeding out. My experience is that any excess of alkali in the soil makes tubers scabby. Why this is I am unable to say; and the fungus theory of our scientists gives no explanation for it.

ADRIATIC BARLETTA ONION.—This is the earliest and smallest of our onion varieties, and makes lovely pickles. If well sorted in July, any housewife will be glad to get them at a fair price. But from what some of my correspondents say about it, I am afraid that a note in one of the recent Ohio station bulletins will lead many growers to use it in the same way as the larger foreign sorts for transplanting. I was astonished to see the Barletta recommended for that purpose in the bulletin mentioned. There must be a mistake somewhere. The Barletta is utterly unsuited for the "new onion culture." It is so very small that it would not pay for the labor of transplanting. In fact, it should be sown very thickly, and not thinned. If seed is sown early in May, the crop will be ready for harvesting early in July. I fail to see that anything can be gained by starting plants under glass and transplanting. Once more, let me say to my friends, don't plant the Barletta except for pickling onions.

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

ROTTEN APPLE CIDER.

The *Bristol Exchange* has the following valuable article on the use of rotten apples for cider: It is in point to add, in connection with the use of a rotten grapes for wine by the monks of Johannisberg, that the rot here referred to is of a specific kind that really adds to the fine quality of the wine. This rot has sometimes been introduced into grapes to improve the wine made from them.

Should rotten apples be mixed with sound ones when making cider? This question is what many people differ on. Some that rotten apples do not have a bad effect upon the cider, and even give it strength. The persons who maintain this theory state that the celebrated wine of Johannisberg in Germany is made from rotten grapes. Usually, this wine was made from sound, ripe fruit, but one year the harvest was late on account of a war, and the monks of Johannisberg (the proprietors of the vineyards), in order not to lose all their harvest, made their wine of damaged fruit, with the consequences that the wine had never been so good, and its reputation dates from that time. Others state, and amongst this number is Mons. Denis-Dumont, that all rotten apples should be thrown away, and in his remarkable work, the "Traite du Cidre," notes the following scientific observation: The sugar matter contained in the apples is the origin of the alcohol which is developed in the cider; to this sugary matter is due the alcoholic fermentation from which the cider more or less derives its strength. If there is no sugary matter there is no alcoholic fermentation and no cider, but a yellowish water, which is tasteless. It results then that the essential point in the making of cider is to choose the time when the apple contains the largest quantity of sugar. Here is the result of chemical analysis: Take three

apples from the same tree, the one to be analyzed before it is ripe, the other in its complete maturity, and the third when it is rotten. The amount of sugar furnished by the green apple is six per cent, by the fully matured apple twelve per cent, and in the rotten apple there is but very little trace of sugar.

The chemical analysis speaks not with the view of pleasing either one set of advocates or the other, but gives the result in language that is exact. It says to the numerous partisans of the use of rotten apples: Put your fruit in the press when it is fully ripe, mix your cider with half water if you choose, and it will still contain as much alcohol and will be as strong as the pure cider which you would obtain from green apples. As to the cider from rotten apples, it is scarcely more than yellowish water.

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Our Farm.

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

Budding Peaches.—W. B. G., Nebraska. Peaches should be budded the last of August or first of September. Will publish a short article on the subject in the early summer.

Grape Seedlings—Scions.—L. B. H., Naraka, Kan., asks: "Will grape-seed bring the same variety?—Will scions cut from young trees fruit as soon as those cut from old trees?"

REPLY:—Grapes do not come true from seed. They are generally grown from cuttings of the preceding year's growth set in spring. They may be grafted.—Yes.

Japan Chestnut.—F. V. K., South English, Iowa., writes: "Will the Japan Mammoth chestnut grow in south-eastern Iowa? Is it a hardy tree?"

REPLY:—It might do something in favorable locations, but the chances are very much against its being of any economic value with you.

Buds for June Budding.—E. S. E., Nokomis, Ill., writes: "How do nurserymen get buds for June budding?"

REPLY:—At the time June budding is performed there are generally some buds sufficiently developed to use for this purpose. If the buds are not going to be large enough, which can be told on observation, the young growth should be pinched back a little, which develops the buds in a very few days, so that they will be fit to use.

Wild Goose and Abundance Plums.—W. H., Emporia, Kan. The Wild Goose plum is generally budded or grafted on some seedling plum. It will occasionally sprout above the graft when such sprouts would be valuable, but as a rule the sprouts from it are worthless because they come from the seedling root. It will not come true from seed. I regard the Abundance as of very promising value for locations south of the 42nd parallel. The Abundance is probably the same as yellow-fleshed Botan.

Caterpillar on Walnut.—T. E. H., Adair, Iowa. The caterpillar attacking the walnut is the *Dotana ministra*. The most feasible way of killing it is by spraying the foliage on which it feeds with Paris green and water. Use 200 gallons of water to one pound of the poison and I think you will get ahead of them. This is a good rule to follow with all insects that eat the foliage. These caterpillars have the peculiar habit of coming down the trunk of the tree to shed their skins and congregating in great masses. At such times they may easily be destroyed with an old broom stub.

Nitrate of Soda on Strawberries.—C. M. A., Moscow, Texas. About one hundred and sixty (160) pounds per acre. It comes in crystals and much resembles coarse salt, with which it is sometimes adulterated. It can be ordered through most of the large seedsmen, wholesale druggists and fertilizer dealers. It costs about three (3) cents per pound. I should think in your section of the country that ground and rendered bone and cattle manures would be so cheap and readily accessible that you had better use them rather than buy expensive fertilizers at a distance.

Pear-blight.—By A. L. Andersou, Tolland, Conn. Four or five years ago I had several trees attacked with the blight. I knew from past experience that the trees would die unless something could be done to save them. I cut off the tops below all appearance of blight and spread grafting-wax over the stub. The result was that the branches immediately below the cut soon began to assume a perpendicular position; and now one would have to take particular notice or they would not discover that anything had ever happened to the trees; they are very thrifty, from twenty-five to thirty feet high and bear well.

Grafting Other Fruits on the Peach.—T. B. P., Onaga, Kan., asks: "Can plum, apricot or cherry be grafted or budded on peach-trees? Give me the direction for budding. Does the apricot come true from seed? Is the nectarine hardy for this latitude?"

REPLY:—1. Peach and apricot may be budded on the peach, but the peach is so liable to borers that it makes a poor stock, and many varieties of plum are very short lived on peach, not forming good unions with it. The apricot does well on native plum, and so does the peach. The cherry does best on cherry. 2. In the northern states the peach is difficult to graft, and for all our stone fruits, budding is the surest. 3. The apricot does not come true from seed. 4. The nectarine is about as hardy as the peach, but is liable to be attacked by the curculio on account of its smooth skin.

Wireworms.—Mrs. A. K. W., Dallas, Oreg. Wireworms are most abundant on land for a long time cultivated, and seldom injure crops on land which has lately been in grass. But if the land you have to use has wireworms in it, it should be heavily manured, unless already rich in food, in order to grow the seedlings as rapidly as possible. Kainite, which is a cheap potash salt, seems often to keep off cutworms and wireworms, and if this is not obtainable, use ashes scattered lightly and mixed in the furrow before sowing the pits. Do not plant the pits until they are almost ready to send out the root, and plow the land as short a time as possible before planting. Of course, you will see to it that every pit is cracked either by frost or by hand before planting.

Fall Growth of Pear-trees.—J. W. C., Ironville, Ohio, writes: "During the month of last September the extreme hot weather caused my young pear-trees to make a new growth, and some of them blossomed. The sap did not have time to form into wood before the frost came and nipped them. Now the wood is black like the inclosed. The bark is loose and will peel off."

REPLY:—On account of the late fall growth the trees went into winter quarters in poor condition, and they have winter-killed badly; but I think they will recover from it. Early in the spring trim off all injured wood and encourage a good growth by manuring the trees lightly with well-rotted manure. But avoid late manuring or any crop that necessitates the working of the soil in the fall. It would be well if you could get along without working the land after August 1st.

Home Nurseries—Stocks for Grafting.—O. E. M., Bear Grove, Iowa, writes: "Should farmers in southern Iowa plant nursery stock grown in Missouri, or should they plant northern-grown trees?—How low should the stocks of apples and plums be cut to the root for grafting, and should the top of the stem be above or below the surface of the ground?"

REPLY:—It would probably be better for them to obtain trees from nurseries in their immediate vicinity, if possible; that is, providing they can get the varieties wanted and first-class stock. If the choice was between trees of equal quality grown north and those grown south, I should prefer the northern trees. —I do not understand what you mean. On general principles, it is best to have grafts below ground. In grafting young plum seedlings I generally use a whip graft, but sometimes a cleft graft, early in spring below the surface of the ground.

Worms in Gooseberries.—E. A. B., Clayton, Cal., writes: "1. What must I do for my gooseberries? I have three choice kinds; they grow well, with no signs of mildew, and fruit well. But the fruit is filled with worms and unfit for use. Is there any remedy? 2. What is the cause of scab in potatoes? Our whole neighborhood is troubled with it. In looking at the potatoes through a magnifying glass they have the appearance of having been eaten by worms. Sometimes there is a spot of scab the size of a dime and the rest of the potato all right. In others the whole potato is covered. In this part of the country we irrigate our ground for vegetables and use large quantities of stable manure. Potatoes here grow to a large size and yield heavy crops."

REPLY:—1. It is quite impossible for me to tell you any remedy for the insect pest affecting your gooseberries, because you have not described it so that I can tell which of several it might be. Please give time of injury and describe the work more particularly. 2. The potato-scab is caused by a fungous which eats into the flesh of the potato. The best preventives are perfectly clean seed planted in new land or on land which has not had potatoes on it for at least the preceding four years. Drainage water from land on which the potatoes were scabby will carry the disease wherever it goes. It is generally better to manure the land with some other crop than potatoes.

Spraying for Apple-scab.—W. W. B., Stewarts Point, Cal., writes: "I wish to know at what time spraying for apple-scab should be applied. I tried spraying with sulphate of copper and water alone, last year, when my trees were in bloom, and it killed everything that it touched in the way of leaves, blooms and small twigs."

REPLY:—In a recent bulletin of the Ohio Experiment Station is the following in regard to time of spraying to prevent scab on apples: "The first application should be made before or about the time the leaves open, but if delayed until a few days after the leaves start, and canker-worms are known to be present, it is well to add Paris green or London purple. The second spraying should be made immediately after the blossoms fall. This application should not be delayed several days, and it is well to commence as soon as the greater share of the blossoms have fallen. There is no necessity of commencing before this time, nor is it advisable. For this application the combination of fungicide and insecticide should be used; that is, dilute Bordeaux mixture and Paris green or London purple, the insecticide being to destroy the apple worm. The third application may be made a week or ten days from the time of the second, and with the same materials. If either ammoniacal copper carbonate or modified eau celeste is used, the Paris green or London purple must be applied alone, since the ammonia present in these solutions renders the arsenite soluble, which endangers the foliage. The fourth and last application for the season should be made in about two weeks from the time of the third, and diluted Bordeaux mixtures alone used. For early ripening the fourth application may be omitted, or the time between applications lessened. This is to avoid leaving a coating of the mixture on the fruit when it is ripe. "If the weather is rainy during the spraying season it is better to keep the work going than to wait for dry weather. Of course, it would be impracticable to spray during a rain-storm, nor would it be best to spray immediately before; but if the mixture has two or three hours in which to dry before a rain, it will adhere so closely that but little of it will be washed off."

Trimming Peach-trees—Grape Cuttings—Spraying Plums—Cultivating Pear-trees, etc.—F. F. W., Wamego, Kansas, writes: "Last year a large crop broke down many of our peach-trees. Would it be a better plan here where we have a peach crop semi-occasionally to trim them severely or to cut them down and set anew? The mercury has been down to thirty-four degrees below zero. Did that injure the trees or the buds so there will be no crops this year?—How shall I manage grape cuttings?—When should

plum-trees be sprayed, and what with, to keep the fruit from blasting?—I have a row of pear-trees where it is cultivated; is it best to cultivate or to seed down? They seem to be of healthy growth, but bear little fruit. They are of the Keiffer and Bartlett varieties. When is the best time to set blackberries out?—How can I propagate currants from cuttings?—For what is hen manure best to fertilize?—What is best for hedge in this locality to protect orchards?—How can one grow a hedge from mulberry cuttings?—When is the time to graft peaches?"

REPLY:—That depends on their condition; most of them will recover if severely pruned. The trees are in this bad condition, probably, because pruning has been neglected. Peach-trees produce such a great amount of fruit buds each year, that from one third to one half of the new wood should be cut off; and this should always be done every year. If neglected, the branches reach out quite a distance from the trunk, and the fruit being born on their extreme ends, the branches are readily broken; besides, if not pruned, the trees set too much fruit, if they bear at all.—The leaf bud and the wood of peach-trees will often stand a temperature of thirty-four degrees below zero without harm, but the fruit buds are generally killed by it. Some observing peach growers claim that the fruit buds will not stand more than twenty-two degrees below zero, but I am inclined to think that the power to resist cold is more or less constitutional, and also dependent upon the humidity of the air. By cutting across the fruit bud you can readily tell whether they are injured or not. If injured, the center of the bud will be brown in color.—I think that grape cuttings should have commenced to callous before being planted out to have the best success with them. This is readily accomplished by early in the spring placing the cuttings bottom up in a trench and covering the butts with about three inches of loam, and then putting on one foot of hot horse manure. This makes the butts warmer than the tops, and they consequently get started before the tops, which is necessary for the greatest success. The land in which they are to be planted should be naturally moist, yet well drained and warm, and in the best possible condition. It is a good plan to plow and harrow it twice before planting. The cuttings should be planted as soon as well calloused. I plant in rows three feet apart and put the cuttings six inches apart, and at least six inches deep. I mark the rows with a corn-marker and then run a subsoil plow in the marks, which leaves the soil in a loose condition for putting in the cuttings. Great care must be taken to pack the soil firmly around the base of the cuttings. —I do not know what you mean by blasting. Please explain.—I think they would fruit best if the land is seeded down. After you get the land in grass, the trees may be used manure, if they bear heavy crops of fruit. —They can be set in fall or spring.—Make the cuttings as soon as the wood is ripe, which is generally by September 1st. Make the cuttings of the new or two-year-old wood, and plant them out at once, leaving only one bud above the land. If carefully done (and it is very easy), the cuttings will be rooted by winter, and should be lightly mulched, and they will make a fine growth next year. They may also be made in the spring, but do not do as well as when made in the fall.—Hen manure is good for any crop. It is especially good for leaf crops like cabbage, lettuce, asparagus, grass, etc.—The white willow, white maple, yellow locust and basswood are fast-growing and valuable trees for shelter belts around orchards.—Treat mulberry cuttings as recommended for grape cuttings and you will be successful.—Peaches are not grafted much in northern states. They are generally budded in August. If grafting is to be undertaken, the work should be done as soon after the growth starts in the spring as possible.

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EDITOR FARM AND FIRESIDE:—I have read the statement that the World's Cotton Centennial Exposition at New Orleans in 1884-5 was the means of bringing at least one hundred millions of capital into the southern states. A glance at the progress made, shown by statistics entitled to credit, indicates that the above estimate is under, rather than over the actual fact.

It should be mentioned that this progress referred to was mainly on lines of manufacture and investments in mining and timber, small account being taken of agricultural development. In this domain much has been accomplished, as one sees by traveling through the southern states, although the advance has not kept pace with manufactures. The rapid growth of the cities, as Nashville, Knoxville and Chattanooga, Tenn., and Birmingham, Ala., during the past six years reveals a condition of prosperity which must awaken a feeling of satisfaction in the breasts of all broad-minded citizens. No man, unless very narrow and selfish, will feel otherwise. The prosperity of one locality affects the well-being of the whole country, and the comingling of people of all sections knits the people more closely together. The resources of the South, as presented at the exposition mentioned above, were a revelation to many, and the measure of its usefulness has not yet been completed.

It was during that exposition that the writer visited the coast along Mississippi sound the first time. This locality had long been neglected. Land was a drug, and the common wish of the owners of property was to sell out. This was the situation. Depression and discontent were evident, and yet this coast region is especially desirable on a number of accounts; but it can, and I doubt not, will become one of the most popular agricultural regions in the United States.

It is not my object in these letters to advertise anybody, but to state plain facts, that have come under my personal observation, as matters of general information and interest to your readers. Possibly it may not only be of interest, but of some use to a number of them. Its possibilities from an agricultural standpoint (I mean agricultural in its enlarged sense) are not, I am convinced, generally understood, and this will in part furnish material for the matter you desire for your columns from this portion of the Union.

A word from a hygienic point of view will close this communication. The country along the Mississippi sound, which extends from Pearl river (the dividing line between Louisiana and Mississippi), has become quite a resort for northern people who desire to escape the rigors of long winters at home. Especially is this true of invalids. As a health resort, "the coast," as it is called, can be highly recommended. In my own case—catarrhal and bronchial difficulties—much relief has resulted from a residence here of several weeks.

A sanitary map has been issued by the U. S. Marine Hospital Service at Washington, laid off in latitudinal zones, showing the diseases prevalent in each. Every zone in the entire country has its special diseases, except one. The only one free from any local disease is this portion of Mississippi on the north shore of the Gulf of Mexico. The wind is either from the piney woods or from the gulf, and therefore free from dust. These winds are nature's health-giving elixir. From the sea they are charged with saline and tonic properties, and from the woods with a resinous breath, which is a balm to many invalids and pleasant to all others.

Ocean Springs, Miss. T. H. G.

ORCHARD WORK IN APRIL.

The first work to be done in the orchard in the north-west is to mulch around the trees just before the frost comes out. This will delay the season of blossoming some days, and helps escape the late frosts.

The early spring is the time to prune and trim. Late in April top-graft any undesirable trees with good varieties.

New orchards or young trees should be set the first good weather in this month. The protection of the bodies by lath should be attended to now. This saves from sun-scald, mice and rabbits; also from whiffletrees when working, and from sheep and calves, if pastured in this much-abused spot.

Wisconsin.

W. D. BARNES.

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H. R. C.

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Milton, Wash.

K. C. H.

FROM ALABAMA.—Cullman county lies in the northern portion of the state, on a western spur of the great Sand mountain. The land here is a gray, sandy soil, adapted to corn, oats, grasses, sorghum, potatoes, peas, ground-peas, etc. Some cotton is raised here. Most all kinds of fruits do well here. It is also a great vegetable country. We have a fine climate. This country is mostly settled by Georgians and Germans, and a few Scotch. Land ranges from \$3 to \$15 an acre. People wanting cheap homes would do well to prospect in northern Alabama.

Cullman, Ala.

G. W.

FROM OREGON.—Times are good here. We have a ready market for everything we raise. The price of land here is reasonable, being from \$10 to \$20 per acre. This is a good stock country, and is good for all kinds of fruit. Hops, grain and hay yield extra crops. This is a first-class prune country. The Yaquina Prune Company has a one-hundred-acre orchard of prunes, the largest one here. Land suitable for prunes, near a railroad station, is no higher than other land. It never gets very cold here. The mercury has never been known to fall to zero. This winter it has been below freezing point only twice. Grass stays green all the year, and plowing can be done at any time.

Summit, Oreg.

W. J. M.

FROM COLORADO.—Fall wheat looks well all along the Arkansas valley. Large bodies of land are being opened for settlement by irrigation. Settlers are coming in large numbers. Land that only a few years ago was covered by cattle will soon be thickly settled. This valley will be a very prosperous country, because it is the most fertile land in the West. Alfalfa looks ten per cent better than at this time last year, and farmers are going to treble the acreage this spring. This valley promises to become one of the best fruit regions in the United States. Every farmer is going to plant good orchards this spring. Bees excelled expectations last year, some stands yielding as much as 125 pounds of honey from alfalfa. Hog raising is destined to be one of our leading industries in the future, as they do so well on alfalfa.

Las Animas, Col.

J. W. S.

FROM ILLINOIS.—Land is higher now than ever before. Jefferson county is one of the best counties in Illinois. Fruit, such as apples, cherries, strawberries, currants, raspberries, gooseberries, plums, grapes, peaches, etc., can be raised in abundance. It is the home of the strawberry and apple. Mount Vernon, our county-seat, is a beautiful, thriving city. The population is about 6,000, and it is the terminus of three railroads. We have other small towns, near which you can find some beautiful farms. Land ranges from \$10 to \$150 an acre. This is considered a healthy place. Our timbered land consists of white and black oak, hickory, pawpaw, elm, maple and walnut. We had an excellent wheat crop last year. Corn and potatoes were also good. Oats were an entire failure. Grass and vegetables are raised in great abundance. Most of our farms are within two and a half miles from a railroad, and in easy reach of schools. A great interest is being taken here in education. The county has a population of 22,000. We have an excellent climate, mild winters, warm summers, and very little wind. Our people are sociable, and you will find this a good place to live. It is a "paradise lost" to those who do not live here.

Woodlawn, Ill.

M. L.

OUR CLUBBING LIST.

We will receive subscriptions for any of the following publications, together with the FARM AND FIRESIDE, at the price named in the last column of the table below. The price includes both papers one year.

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Our Farm.

THE POULTRY YARD.

Conducted by P. H. Jacobs, Hammoncton, New Jersey.

PURE-BRED STOCK AND FARMERS.

While it is true that some common fowls that are native to the climate are hardy, and thrive better than perhaps some pure breeds may, yet the observation of the farmer will convince him, after due time, that the greatest profit is from the pure-bred stock, provided he will learn the characteristics of the breeds. It is just as much the duty of the farmer to know all about the different breeds as it is to know how to plow and cultivate. It would surprise any farmer if his family physician should inform him that he could not distinguish one disease from another; yet there are thousands of farmers who cannot go into a herd or a flock and distinguish the different breeds. Are such farmers really farmers? Have they completely "learned their trade?"

What is common stock? It is said that there are a great many pure breeds. There are more different kinds of common fowls than there are of pure breeds. There is at least some uniformity in a pure breed. One hundred Leghorns, or Plymouth Rocks, or other breeds, will be so nearly alike that the farmer will be unable to note any difference, but it is seldom that two common fowls are alike. All common fowls are not just alike in characteristics. One flock may contain some excellent layers, while another flock may be worthless. If a good flock is found, it is often the case that it is the result of indiscriminate crossing from some pure-bred fowls, and the common stock has repeatedly been praised for excellence when the credit really belongs to pure breeds.

Those who ridicule the enterprising farmer for expending an extra sum for pure-bred males, never fail to come around at some time and request to "change eggs." They might as well, with equal propriety, ask to exchange a mongrel calf for a Jersey; but they know that a kind neighbor will oblige them with the eggs rather than break friendship, and they take advantage of his enterprise. It pays to buy pure-bred stock, however, even when one has to change eggs with those who do not encourage pure breeds.

WINDOWS OF A POULTRY-HOUSE.

A large window admits more heat and light during the day, but it radiates the heat rapidly at night. One of the most essential requirements in a poultry-house is light, as the hens will abandon a darkened house during the daytime, no matter how warm it is. Instead of using very large windows, there should be small windows, on at least two sides (or in front and at the ends), so as to render the house light and cheerful in every part. Another advantage of using a number of small windows is that they are cheaper than large ones, and the cost is increased but little. They also admit the sunlight from all quarters during the whole of the day, and aid in more rapidly drying the floor, should it be damp.

FEEDING MIXED LOTS.

It is a mistake to feed the hens and growing chicks together, as the result will be that the hens receive too much and the chicks too little food. At this season one good meal a day is all that adult fowls should have, as too much grain causes them to become too fat. Chicks, on the contrary, until three or four months old, should have two meals daily. If all the fowls are fed together, the proper apportionment of the food cannot be observed. If the food is not given with judgment, the result is a waste and an increase of the cost.

CLEANING WATER FOUNTAINS.

The ordinary fountains are not easily cleaned, and in the course of a week or two become covered on the inside with slime. To get them clean, use the soap-suds from the family washing. Add a gill of kerosene to each bucket of suds. Immerse the fountain in the suds, which should be boiling hot. They should remain in the suds until the water is cool enough to allow of shaking the fountains well and then rinsing them in clear water.

WET OR DRY FOOD.

A discussion is being conducted in several journals regarding the advisability of giving the food in a dry or wet condition. Both methods are excellent. There are occasions when it is an advantage to feed moist food, especially when potatoes or turnips are plentiful, and if the ground food is scalded, the hens will prefer it. Something depends on the season of the year, however. In the summer and fall but little grain should be given, and it may be fed dry, as the hens will not require so much care as during the colder season. If well supplied with grit, for grinding, the larger portion of the food may be fed dry.

BEANS AND PEAS FOR POULTRY.

It has been asked if raw beans are suitable for poultry. Such food is too expensive. Beans and peas are highly nitrogenous, and may be fed raw or cooked, but three times a week is often enough. Much depends upon the prices of such articles compared with the price of eggs. During the winter, when eggs are selling as high as forty cents a dozen, the best food that can be procured is not too costly if the hens are laying. It pays to buy fresh, lean beef, at ten cents a pound, when eggs are twenty-five cents a dozen, as a pound of beef will make a sufficiency for twenty hens.

SHOULD PURE BREEDS BE CROSSED?

It is of no advantage to cross pure breeds. The Leghorn and Plymouth Rock, for instance, each have their peculiarities, and in attempting to blend their qualities, both pure breeds are obliterated unless the crossing is continued judiciously thereafter. During many years' observation of the crossing of pure breeds, the result has usually been that the whole flock dwindled down to nondescripts. The better plan is to keep the breeds pure.

CORRESPONDENCE.

A CHOLERA CURE.—If your fowls get cholera, mix Venetian red with their food, and if the hens are too sick to eat the food, force it down them, and they will be well in a day or two. The dose is a tablespoonful of the Venetian red in half a gallon of meal, the meal moistened, and fed. It may also be given occasionally to prevent the disease. O. R. F. *Stantonville, Ark.*

WHITE HOLLAND TURKEYS.—I notice that some one states that the White Holland turkeys are the smallest, which is a mistake. The common white turkeys are the smallest, the White Holland being a distinct breed, much larger than the common white. A White Holland turkey at six months old will weigh as much as a Bronze at the same age; but keep them until one or two years old, and the Bronze will greatly outweigh the White Holland. Turkeys are naturally very hardy, but are becoming delicate and hard to raise on account of inbreeding. The nicest market turkeys I ever saw were a cross of White Holland and Narragansetts. The White Holland and Bronze hens make an excellent cross for market turkeys, being of large size and very plump. MRS. S. B. *Damascus, Ohio.*

AN EGG RECORD.—I read in your paper of the egg record which Mrs. F. D. sends in, for 1891, from her thirty-five hens. I commenced May 1, 1891, with two hens, and twenty-four chicks with each hen. September 1st finds me with thirty-four, all told. The flock was reduced to thirteen pullets and one rooster November 1st. Pullets began laying October 20th. My receipts for eggs and poultry are \$38.80, and my present valuation of the pen is \$17, making a total of \$55.80. The cost of my hens and chicks and the expenses of feed up to the present time has been \$21.21, leaving a balance for profits of \$34.59. I have on hand feed enough for some time to come. My egg record for the last three months is 54 dozens and 10 eggs. The highest price was 40 cents, and the lowest 28 cents. My breed is Plymouth Rock. Framingham, Mass. MISS A. F. H.

CROSSING FOR INCREASE OF EGGS.—To make an experiment, I purchased last spring a Red Cap male and three hens and a Wyandotte male. I already had Plymouth Rocks. I allowed them to cross, my purpose being to breed for eggs and early maturity, large size and rose combs. The pullets from the matings hatched last April and May, have been laying ever since Christmas without ceasing, and they weigh from seven to ten pounds each. They have, also, rose combs, so I think I succeeded beyond my expectations. Some of my enterprising (?) neighbors in Tennessee hooted the idea of paying five dollars for two roosters. I am satisfied, but they will never get beyond the dunghill rooster. They call any chicken a Plymouth Rock that has gray feathers. I think I have a flock now that beats all records, both in eggs and size. I feed

a quart of shelled corn to twenty hens once a day, and let them hunt in the vegetables; also compel them to dig for the material to grind their food in the gizzard. G. C. *Marble Hill, Indiana.*

FEEDING IN COLD WEATHER.—One of the best feeds for chicks in cold weather, when green stuff cannot be had, is to take clover hay and cut it very fine. A tobacco-cutter answers well for cutting it. Pour boiling water plentifully over the chopped clover and let it stand all night. The next morning heat it, adding potatoes, carrots, turnips, beets or anything you prefer. A small piece of beef, beef liver or ground meat may be put in. When well cooked, thicken with one part fine bran, one part ground oats and two parts corn-meal, salting to taste. Now add a teaspoonful fine boue-meal, and the same quantity of charcoal, and you have a cheap, nutritious, valuable food, which contains all the elements necessary to heat, growth and health. Once a week parch some wheat screenings, ground oats, or even corn-meal, and feed to them, the meal being moistened. There are a good many ways to feed poultry and not get anything for your food, and that is by wasting and overfeeding your fowls; and your hens will not lay. You must feed different kinds of food, and change every day or two; and if you want eggs you must feed food that will produce eggs, provided you don't get your fowls too fat to lay. Too much corn is not good; you must feed bone-meal and light feed, and if you feed corn in winter, warm it on the stove, and keep your fowls in warm houses. Give them plenty of sunshine and range also; give them all the water they want. You should not let them drink the water too cold, as fowls are very easily chilled, and a great many diseases are brought on by this very way. If you want to fatten fowls, pen them up in coops. The coops may not be large; you can put four in a coop; feed them corn-meal and bran, mixed in milk; the coops should be cleaned every day. If you want a fowl that sells well in market you should have a fowl that has yellow skin. Never put roosters in with your hens which you are feeding for market. Never keep more fowls than you can feed well, and have plenty of room for them. L. E. S. *Pottsville, Pa.*

FEEDING HENS FOR EGGS.—I saw the above heading in FARM AND FIRESIDE, and was very much interested in reading it. We can hardly fail to profit by an interchange of views. The writer's experience in some respects is different from my own. After keeping hens for twenty-five years I find that breed is not altogether reliable. The Buff Cochins and Light Brahmas bear confinement better than the smaller kinds. The Plymouth Rocks are an excellent kind, both for laying and for the table; but after keeping them, or rather breeding them, three or four years, I find they are not as healthy. I have better results by crossing with the Wyandottes. Three or four years thereafter I make another change. In this way, I keep my fowls in a healthful condition. Fowls, like men, produce better when in health. As to perches, I adopted the low-down plan of your correspondent a number of years ago, and am pleased with it. As to preventing lice, the use of kerosene oil is attended with a great deal of trouble, and its use is not very satisfactory. I have not seen a louse in my henneries for five years. Formerly, I raised in my garden a few tobacco plants, and hung up two or three in each henneries. Later, I get tobacco stems of cigar manufacturers, and put a handful in each nest, with two handfuls of air-slacked lime, renewing or adding to them occasionally, as needed. At the same time I scatter some of the lime about the henneries. Once every year I steep two or three pounds of stems, or other cheap tobacco, in two or three gallons of water, and sprinkle the nest and the perches. As to feed, my experience is very different from that of your correspondent. I once fed wholly on corn, and my hens were fat, but did not lay eggs. After consulting with others I saw my mistake, so I changed the manner of feeding, both in kind and amount. After a time the difference in my interest was very apparent. Feed is the most important factor in successful poultry-raising. A man who knows how to feed properly will soon learn the other points, which means success. I feed but twice a day. In the late afternoon I chop up crumbs, parings, etc., from the table, and have the table waste from a neighbor near by, rejecting lemon, orange peel, coffee and tea grounds, etc., adding a small amount of wheat, oats, or wheat bran, to each mess. Once a week a little mixture of fine table salt, and once a month a very little red pepper is given, taking care that the fowls do not get it in their eyes. In the morning I feed equal parts of corn, oats, and wheat. To a pen of twelve layers and one male I give thirteen handfuls of the grain, and to those having no access to barn-yard manure, two or three extra handfuls, adding a basket of hay-seeds and litter, occasionally, for the hens to scratch over. Hens that are active not only work off any surplus fat, but do better in every way. Sometimes I skip the evening feed, and bury dry grain a little underground so they must scratch for it, giving them just the exercise they need. Don't keep grain by your hens all the time. Give them what they will eat, and in the course of

a couple of hours clean up. Too much feeding is a stupid blunder. A hen properly fed and cared for will produce just about an average number of eggs during the year. Living in the city, with no land to cultivate, I sell the droppings to farmers, at one dollar per barrel at the door—thirteen to fifteen barrels each year. I have two henneries of twelve to fifteen hens and one male, both one year old preferred, from which are selected eggs, about March 25, for sitting. One other has no male. These hens produce more eggs. In the fourth pen are about twenty pullets and two males. For the want of room I keep them this way. Pullets, cockerels and old birds should not be in the same pen. Young fowls need more feed, and different treatment. The fifth is a pen without a floor, where the culled cockerels are kept from November to March, and fed for table use. By the first of March they are disposed of, and the building is, with boxes, high covers for temporary use and preparing the ground, fitted for sitting. I bore a few holes in the bottom of each box, put pine shavings at the bottom, then coarse hay (not rowen), and place the boxes on the ground. First, set the hens on a china egg for a couple of days to get them contented. I set two or four at a time; one hen will usually brood the chicks of two. Have kept an account of expenses for fifteen years, and with the above-named management my hens net a profit of one hundred per cent, making "The Keeping of Hens" not only some labor and care but a real domestic pleasure. S. W. C. *Hartford, Conn.*

INQUIRIES ANSWERED.

Roup.—P. M., North Benton, Ohio, writes: "My hens took some disease last summer, all at once, and it appeared in the throat, with wheezing and difficult breathing. Some are still affected. Another trouble is bowel disease, but hens eat well."

REPLY:—The disease is roup, probably caused by contagion. It is very difficult to eradicate, and it will be more economical to destroy them, and begin with new stock, owing to the labor required to attempt to cure them.

Hens Eating Eggs.—R. E. E., Arlington, S. Dak., writes: "Please inform me how to stop my hens from eating eggs?"

REPLY:—Make nests of soap-boxes, so that hens must enter from the ends, and have the nests ten inches off the floor. As the hens cannot reach the eggs from the floor, and cannot stand up in the nests, they cannot eat the eggs, and will soon forget the vice.

Testing Eggs.—S. L., Phillips, Neb., writes: "I read that eggs could be tested in five days after they have been under a hen. Can you give me any information regarding the method?"

REPLY:—To test eggs, take them into a dark room, and hold them to a strong light by first folding a newspaper into the shape of a funnel, looking through the egg by placing it at the large end of the funnel. Clear eggs are not fertile. Egg-testers can be had of incubator manufacturers, with directions for using.

Egg Eating.—J. C. B., Versailles, N. Y., writes: "My hens eat their eggs as fast as they lay them. Please give me a cure."

REPLY:—See reply to R. E. E., above.

Preserving Eggs.—J. W. D., Dothan, Ala., writes: "Give me the best recipe for keeping eggs in good condition."

REPLY:—Keep them cool—temperature not lower than 40° nor over 65°—on shelves or racks, and turn them three times a week. Infertile eggs keep best.

EGGS From first-class stock. **Prices Away Down.** Send three stamps for 40 page Catalogue, finest published, elegant colored plates. C. C. SHOEMAKER, Freeport, Ill.

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Our Fireside.

TO PHYLLIS IN A GINGHAM DRESS.

Silks and satins, velvets, laces,
Well accord with pretty faces;
But tho' only artless graces
Deck thy beauty, I confess,
Virtues all thy form embraces,
Phyllis, in thy gingham dress.

Oh, my Phyllis! gems the rarest
Least the setting need; and sparest
Perfume breathe to heaven the fairest
Flowers—fair but spiritless.
To the violet thou comparest,
Phyllis, in thy gingham dress—

Not to eyes alone appealing,
Charming sense while yet concealing
Beauteous fount of fragrance, stealing
From the emerald wilderness.
This is why love touches, kneeling,
To his lips thy gingham dress.

—New York Sun.

GIRLS!

OR,

Reminiscences of an Eavesdropper.

BY JOSEPHINE HILL.

I AM only a poor old maid. But even old maids with slender waists, and smaller purses, enjoy a hot oyster or clam stew occasionally, and while sauntering down Broadway, not long since, such a longing for one of the above-named delicacies took possession of me that I determined to answer, for once, the cry of the inner woman, and squelching with one fell blow the weak, faint voice of Economy, I bravely entered Maillard's, one of the prettiest and toniest places in the western world. However, its tone is not the highest thing about it, by any means, as one will readily perceive in looking over its menu.

With gloomy grandeur one of John Bull's stately sons approached me. My modest order for an oyster stew was quickly served, but with an impressiveness that completely awed me. His exquisite politeness seemed a rebuke. I felt disconcerted at putting him to the trouble of waiting on so inferior a person as myself. His whole demeanor betokened such resignation! It seemed to say: Look at me! observe me! Am I not grand and magnificent—fit to occupy a seat in parliament? And yet, forsooth, here I am, a plebeian servant in an American *cafe*, instead of an honored member of the House of Lords!

His baronial dignity was overpowering. The longer he lingered the smaller I felt; but soon, to my intense satisfaction, he, with one parting glance of supreme hauteur that would have done credit to a Pullman porter, left me to my thoughts and soup.

"Now," said I to myself, "I can eat in peace;" but, alas! for the frailty of human expectations. No sooner was I rid of one *bete noir* than six more took his place. If I was confounded and embarrassed in the presence of one, what do you think my feelings were when some half dozen of the same manner and extraction posed themselves at respectful distances, and then, with features that, as far as mobility was concerned, might have been cut out of stone, they silently watched me. Six pairs of eyes followed the ascent and descent of each spoonful of soup from the bowl to my mouth.

This was not pleasant. I was amused and enraged by turns. At one time I tried the effect of eating very fast, in the hope of confusing the regularity of their glances; but no, John Bull is equal to any emergency, and their eyes never missed one round of my spoon.

The rapidity with which they were thus compelled to move their optics was vastly amusing, but through it all they maintained that calm, unruffled serenity that at last made me downright indignant, and, disgusted with the whole thing, I was on the point of flinging down my napkin, like a man, and leaving the table, when relief came, most opportunely, in the guise of four as charming goddesses as ever graced Olympus of old.

Their entrance was a breezy diversion, and instantly claimed the attention of my six unconscious tormentors and that of myself. I easily forgave John Bull some of his past sins when he seated them at a table near my own. I looked at my soup, made up my mind to make it go as far as possible, satisfy a vulgar

feeling of curiosity, and see how four such enchanting beauties would conduct themselves.

For at least one sixteenth of a second they were absolutely silent, as with closed mouths, wrinkled brows and other visible signs of profound thought, they scrutinized their bills of fare.

Soon, however, glances began to travel around the table in hopes of seeing how the others were deciding; and one petite houri, by whose side Mohammed's choicest beauty would pale, threw down her card and, directing her question to no one in particular, asked with a heavy sigh:

"Well, what are you going to take?"

A stately Juno opposite chose to answer the wandering query: "I hardly know," with pretty hesitancy; then, quickly, brightening, "what are you?"

"I'm not sure—let me see," and Houri studied intently the list again, but with no better result, for she shook her head and sadly moaned: "I don't know what. So many things, it's hard to decide," she added, apologetically.

"Yes," assented Juno, "it is, but—"

"Say, girls," cried a dimpled Venus who as yet had said nothing; "why not take oysters?" and her eyes rested lovingly on my half-finished bowl.

"Oysters!" cried Juno, with a horrified expression; "they are one of the hardest things on the complexion you can eat, and it's too early in the season to place that precious article in jeopardy."

"I don't believe they're hard on the complexion," said Houri, with an air of conviction; "I never heard *that* before."

"Perhaps *you* haven't devoted as much time to the study of hygiene as some others have," with cutting pointedness.

Poor Houri was crushed for an instant, then

"Oh, pshaw! I think you're over-particular," remarked Venus, in muffled tones, caused, probably, by a morsel of cake sticking in her dainty throat. Then, washing down the obstacle, she continued more clearly: "I know of no one objectionable in the set unless it be the Nortons, and for my part I don't see why we should ostracize the family because Charlie Norton chose to make a fool of himself."

"Charlie Norton! what about him?" demanded Diana, letting her spoon fall with surprise; "he seemed to be on top last winter. From what I heard I supposed he was the beau of the whole town."

"Not quite that," said Juno, in her lofty way, "but Charlie was a prime favorite, and might have been yet—"

"Such lovely bangs and moustache," murmured Houri, between bites; "but some people are born unfortunate, and always do the wrong thing."

"Your words are ominous, Lady Wisdom," laughed Diana; "what did our naughty Don Juan do? Rob a bank? it is quite a fad now among the upper ten; kill a superfluous rival, or merely elope with some already-married dame?"

"Worse than that," cried Houri, almost choking in her attempt to tell the news first; "he married a commonplace, cheap actress, no person ever heard of. If she had been a star like—like Beruhardt, or a singer like Patti—but to think he would go marry a little nobody of an actress, when he had such splendid chances. Why, everybody said he could have had Sallie Golders for the asking."

"What! that odious, ill-mannered person I met, who had such luminous hair, and always appeared in such startling make-ups? Well, I must say, even a cheap actress would be preferable to her, even if she could show a thousand dollars for every freckle," and Diana

"It's queer," interposed Venus, at this point, "but I was with Charlie Norton at the theater the first time he ever saw his wife."

"You don't say so!" ejaculated Houri. "What was the play? 'Tin Soldier,' wasn't it?"

"No; 'A Hole in the Ground.'"

"Oh, yes; I remember. Awful funny play; I laughed till my hair fell down; was so mortified. Did you ever see 'A Hole in the Ground?'" addressing Diana.

"No. So it was an actress in 'A Hole in the Ground' that cost Charlie Norton his place in society and robbed his sister of a prospective title! Girls," and Diana's eyes had a roguish twinkle in them, "it is a wonderful coincidence, but, do you know, a hole in a chair cost me millions of dollars?"

"Millions of dollars," whispered Houri, with eyes as big as saucers, while Juno, surprised out of her customary politeness, said very plainly:

"Never knew you had so much money; besides," she added, on second thought, "how could a hole in a chair cost one millions of dollars?"

"Do tell us how," begged Venus, all curiosity.

"What time is it?" demanded Diana, with provoking calmness.

"Oh, it's not late; go on, please," urged Houri.

Here I found, to my dismay, that every vestige of my soup was gone. I had frequently heard that the west was slightly inclined to prevaricate when it found itself east, and as this "chair story" bid fair to be a fine example of its versatility, I made up my mind to hear it, cost what it would. So, with this end in view, I ordered a chicken sandwich and a cup of coffee.

Diana sipped a few swallows of water, while evidently collecting her thoughts. The rest, in anticipation, were still as mice. Even Juno forgot her patrician indifference and showed faint signs of interest.

"Do you remember," commenced Diana, "my swell St. Louis beau I had a couple of years back?"

"The man who was so awful rich, and had consumption?" asked Houri, with a charming flush of excitement.

"Yes," said Juno, thoughtfully, "I do remember it was rumored some time ago that you were to wed a most desirable party, who, I understood, was afflicted with consumption."

"I don't call a man with consumption a 'desirable party,'" pouted Venus.

"It altogether depends on surrounding circumstances," rejoined Juno, with one of her insinuating smiles.

"Oh, he's all right if he has plenty of money," cried Houri, with a wise nod in Venus' direction;

"but where is the *Cresus* now?" turning her attention to Diana.

"That I am not prepared to say; but as all of you seem perfectly clear concerning the man, I'll go on with my story. I fully believe I would have married the man if it hadn't been for a miserable hole in one of my Aunt Cynthia's chairs. There, girls," her cheeks dimpling with suppressed merriment, "don't pass judgment on my sanity till I'm through. To continue, the unfortunate man fell deeply in love with yours truly; that is, as far as his weak lungs and polished manners would allow him. He must certainly have studied and learned the book of etiquette by heart."

"Not at all," curtly inserted Juno; "culture is a gift, not an acquirement. His perfect manners were only the innate instinct of a high-born gentleman. *Family always tells.*"

"Well, hardly in this case," continued Diana, with badly-affected gravity, "for no one would ever have thought that such a man, whose tone, bearing, conversation, deportment, in every way was simply irreproachable, was the son of an exceedingly commonplace old dairyman, whose immense wealth was the result of a stroke of luck which converted his farms into valuable city property."

Juno didn't offer any suggestions.

"Yes, if he hadn't been so excessively *au fait*; had been content to behave a little more like ordinary mortals—but I'm ahead of my time. He had paid me quite a good deal of attention, and it was generally thought by my friends and myself—with mock solemnity—"that his intentions were serious; but, of course, a man of his delicate tastes would not be expected to fling himself at his idol's feet till a proper degree of preliminaries had been gone through. In the meantime, I went on a visit to Aunt Cynthia and Uncle Job, in the country. Now listen, girls, for this is where the plot thickens."



quickly rallied by saying, with snapping eyes, that *she* wasn't subject to freckles and pimples, and so had never given any time in studying how to prevent them. Juno was righteously indignant, and was evidently preparing some scathing remark, when a mischievous, black-eyed Diana came to the rescue and poured oil on the troubled waters.

"Come, girls, you don't seem to know exactly what you want; guess I'll decide for you. Suppose we take cream?"

"All right," agreed the rest, seemingly well pleased.

"But what kind?" asked Venus.

Once more the bills were scanned. All this time John Bull stood by, a mountain of patience; but I noticed that an expression, almost imperceptible, of weariness was beginning to play across his cast-iron features.

"Ah, Johnnie," thought I, with fiendish glee, "revenge is sweet."

Houri finally concluded that Neapolitan cream was the next best thing to oysters; the careful and fastidious taste of Juno was to be satisfied with lemon ice; Venus let her decision fall on chocolate, while Diana took tutti-frutti, although Houri informed her with pathetic earnestness that the last time she ate it, it had made her awful sick.

The young ladies were passably quiet till the advent of the cream, and they then entered into the most bewildering confab on all subjects, from the latest Paris fashions to even the religious topics of the day, that I was lost in amazement and could have exclaimed, with Poll: "Wonder what they'll say next?"

"No," said Juno, in very clear and pronounced tones, "I do not intend to do any church work this winter," with a shrug of her aristocratic shoulders; "the set is becoming too mixed, and you have to treat people well there that you do not care to recognize elsewhere, you know."

indulged in a snarl that did not harmonize very well with the rest of her pretty features.

"I think so, too," said Venus, "although at first I felt very hard toward Charlie—not that I wanted him myself, you know," with some energy, "but it does seem that he might have done better than to marry a mere actress."

"Why shouldn't a man marry an actress?" broke in Diana, with a proud toss of her head. "If he loves her, and she is a worthy woman, I can see no objections to such a match. I don't think a man descends an inch in the social scale when he marries a respectable woman, even if she be an actress. Besides, she may have been very poor, and obliged to earn her living that way," and generous Diana looked very lovely in her warm defense of the little actress.

"That is very pretty reasoning, and will do to talk, but the world looks at such things in a much different light; and whether this particular person was an angel in temporary distress or not, the world does not seek to know. She was an *actress*, and the Nortons have been below par ever since. So far as I am concerned," finished Juno, with some force, "I think if people will break society's laws, and marry beneath them, they ought to suffer the consequences; but the family suffers most."

"Just think," mused Houri, who had been busy devouring a wine cake during the last outburst, "his sister was engaged to the loveliest love of an Englishman, with blue eyes and brown mutton-chops, *only four removes from a title*, but, of course, when he heard of Charlie's *mesalliance* he never turned up again."

"Honorable, to say the least," remarked Diana.

"Yes, indeed," went in Houri, all unconscious of the implied irony; "such a family as his could never think of allying themselves to the Nortons after *that*."

In consequence of the last remark, all eating was suspended.

"Uncle Job is only a plain farmer—but very rich—"

The half-gathered frown disappeared from Juno's placid countenance.

"And like a good many other people, he is much given to putting off till to-morrow what ought to be done to-day. Aunt Cynthia, whose rotundity of figure is one of the remarkable things about her, told me on my arrival that she hoped I wouldn't bring any company to eat, for uncle would put off getting new dining-room chairs. I paid little or no attention to her admonition, and when, a few days later, my 'Beau Brummel' paid me one of his polite visits, I forgot all about aunt's previous advice, and boldly invited him to dine; but it was speedily brought to my mind by Aunt Cynthia, who, with tears in her eyes, asked me what she should do. 'I'll fix that all right,' said I, with confidence, and entering the room I placed a good chair at 'Beau Brummel's' place and one at Uncle Job's, then putting a bad one at aunt's plate and a worse one at mine, I arranged the rest, which looked healthy, but had weak backs or crippled legs, around the room to relieve its bareness. I then, with a smile over my success, asked the company out.

We were all seated and everything was going lovely, when Aunt Cynthia, suddenly discovering some article missing, left the table to get it, carefully pushing her chair out of sight before so doing. I laughed and chatted away, no presentiment of the coming tragedy warning me. At last Aunt Cynthia's round person appeared, carrying a large tureen of something, and before I could prevent him, 'Beau Brummel' flew to her assistance, and with the grace of a Raleigh throwing down his coat, he gallantly pulled out Aunt Cynthia's chair for her—and, of course, the deed was done. He looked at the hole in the chair, and then at Aunt Cynthia. Aunt Cynthia looked at the chair, and then helplessly at me.

"Before I could gather my wits together I was stricken speechless with terror, for off he ambled to the other side of the room, and attempting to pick up one of the cripples, its back came off. He turned violently red, but sought the next one. On being touched, its leg fell out. I followed his movements with desperate calmness. 'Now,' thought I, 'what will he do?' But he was bound to hold his own with adverse fate, and with a generosity that made me almost worship him, he gave Aunt Cynthia his chair and bravely took her almost seatless one."

Here the girls broke into such ringing laughter that my low mirth was unnoticed.

"You may be sure," resumed Diana, when they had quieted down somewhat, "that meal was short and quick. I felt intuitively that it would be the finale of any secret hopes I had entertained concerning his 'coming to the point' that day; for how could a young man's thoughts turn to those of love, when all his wits and ingenuity were being called into active play to preserve his equilibrium and prevent his going through to the floor. The affair stifled any proposals he had intended making, and my golden dreams, which had been pardonably sanguine to that point, were doomed to disappointment. Although he never proved desultory in his after attentions, still we never quite bridged the chasm, and being compelled to seek another climate, he went to some point on the Pacific coast. But the change was too great; after a residence of only a few months he died, and—"

"I see," interrupted Hour, with shining eyes, "if it hadn't been for that hole in the chair he would have proposed, you would have accepted him, had a swell wedding with loads of bridesmaids, gone west with him, and to-day you would be the most charming widow in the United States," concluded Hour, who had an eye to pleasant terminations.

"It was, indeed, a most unfortunate blunder," was Juno's calm verdict.

"Unfortunate?" cried Venus. "I can think of no unhappier fate than to be a widow."

"My dear," replied Juno, in soothing tones, "you forget there are widows and widows. Of course, knowing his state of health beforehand, her grief would have been tempered with reason, and—"

"Just think how lovely she would look in black," dreamily suggested Hour.

"Really, quite *distingue*," remarked Juno, after critically surveying her through her lorgnette.

"And the money!" soliloquized Hour; "think of having millions of dollars, all your own! What would you do with it?"

"I?" laughed Diana, through her half-closed, almond eyes; "oh, I would take you to Europe, present you at court, buy a real, bona fide nobleman for you—and—be your dearest friend ever after."

"Would you, really?" smiled Hour, joyfully, then settled down with such a look of comical woe and regret on her piquant face that I forgot I was playing the part of an unworthy eavesdropper, and gave vent to my feelings in a most resolute "Ha! ha!"

Four angry goddesses turned on me their wrathful glances; their dishes were pushed aside in high displeasure, and I saw, rather than heard, the words, "unpardonable impertinence," fall from the scornful lips of Juno, as they haughtily left the table. Ah! well, girls, I hope you will forgive me. I don't know when I have enjoyed an hour so much.

the fact that my poor purse suffered to

the extent of \$1.25 does not detract from its pleasures. I laughed many times that afternoon when the crippled chair, consumptive lover, and Hour's woe-begone expression came to mind; and I've no doubt but that the passing pedestrian who noticed me put me down as a harmless but merry lunatic.

RAZORS.

The finest grades of razors are so delicate that even the famous Damascus sword blades cannot equal them in texture. It is not generally known that the grain of a Swedish razor is so sensitive that the general direction is changed after a short service. When you buy a fine razor, the grain runs from the upper end of the outer point in a diagonal direction toward the handle. Constant strapping will twist the steel until the grain appears to be straight up and down. Subsequent use will drag the grain outward from the edge, so that after steady use for several months, the fiber of the steel occupies a position exactly the reverse of that which it did on the day of the purchase. The process also effects the temper of the blade, and when the grain sets from the lower and outer point toward the back, you have a razor which cannot be kept in condition, even by the most conscientious barber. But here's another curious freak that will take place in the same tool: leave the razor alone for a month or two, and when you take it up, you will find that the grain has assumed its first position. The operation can be repeated until the steel is worn through to the back.

GIVE THE BOYS A TRADE.

Go where you will and you will find youths entering manhood without any equipment for the struggle before them. Tens of thousands of them hope to become merchants when they have no aptitude whatever for commercial affairs, and are doomed to lives of bitter toil and grinding poverty. This ought not to be. Everybody in America is justly entitled to a trade, and he ought to have the chance to master one. Many sons of poor parents and many orphan boys are compelled to forego the inestimable benefits of apprenticeship, and these ought to be assisted by wise philanthropy, but very many more fail to improve the great opportunity of becoming a skilled worker, and so drift into the laboring army to become helpless victims of poverty all their lives. Boys in town and country, learn a trade. It will be your surest and best friend through life. Parents, in whatever else you come short, don't fail to see to this matter. You will be ensuring the happiness and comfort of your sons, the welfare of those who come after them, and discharging a solemn duty you owe to society and the country.

CHINESE FARM-HOUSE.

A recent traveller remarks that a Chinese farm-house is a curious looking abode. Usually it is sheltered with groves of feathery bamboo and thick-spreading bauyans. The walls are of clay or wood, and the interior of the house consists of one man's room, extending from the floor to the tiled roof, with closet-like apartments in the corners for sleeping-rooms. There is a sliding window on the roof made out of oyster shells arranged in rows, while the side windows are mere wooden shutters. The floor is the bare earth, where at night there often gather together a miscellaneous family of dirty children, fowls, ducks, pigeons, and a litter of pigs, all living together in delightful harmony. In some districts infested by marauding bands, houses are strongly fortified with high walls, containing apertures for firearms, and protected by a moat crossed by a rude drawbridge.

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To remove water from the surface of the road is not enough. Water must not stand in the ditches or capillary attraction will keep the road sticky if not muddy.

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Our Household.

IF MOTHER WOULD LISTEN.

If mother would listen to me, dears,
She would freshen that faded gown,
She would sometimes take an hour's rest,
And sometimes a trip to town.
And it shouldn't be all for the children,
The fun, and the cheer, and the play;
With the patient droop on the tired mouth,
And the "Mother has had her day!"

True, mother has had her day, dears,
When you were her babies three,
And she stepped about the farm and the house,
As busy as ever a bee.
When she rocked you all to sleep, dears,
And sent you all to school,
And wore herself out, and did without,
And lived by the Golden Rule.

And so, your turn has come, dears,
Her hair is growing white;
And her eyes are gaining the far-away look
That peers beyond the night.
One of these days in the morning,
Mother will not be here,
She will fade away into silence—
The mother so true and dear.

Then, what will you do in the daylight,
And what in the gloaming dim?
And father, tired and lonesome then,
Pray, what will you do for him?
If you want to keep your mother,
You must make her rest to-day;
Must give her a share in the frolic,
And draw her into the play.

And, if mother would listen to me, dears,
She'd buy her a gown of silk,
With buttons of royal velvet,
And ruffles as white as milk,
And she'd let you do the trotting,
While she sat still in her chair;
That mother should have it hard all through,
It strikes me isn't fair.

—Margaret E. Sangster.

HOME TOPICS.

HAM HASH.—After you have used all of a boiled ham that will slice nicely there is still much good meat left; chop this fine, fat and lean together, and add at least three times as much cold chopped potatoes; beat one or two eggs and mix with the ham and potatoes; put the hash in a frying-pan in which you have melted a little butter and press it smooth over the top. Do not stir or turn the hash until it is browned nicely, then fold one half over the other like an omelet, turn it out on a platter and send to the breakfast table steaming hot.

BAKED SALT PORK.—Now don't laugh at the idea of being told how to bake salt pork, for I lived—well, I'll not say how many years before I knew this way of baking it.

Take a thick piece of salt pork, large enough for your family, gash the top with a sharp knife, making incisions an inch deep and half an inch apart, then soak it over night in sweet skimmed milk. Two hours or more before dinner make a highly seasoned bread dressing and press it into the incisions; lay the pork in a baking-pan and pour a cupful of milk over it to baste with. Baste it often, and about forty minutes before it is done, pour off part of the grease and lay peeled potatoes around the meat to bake and brown in the drippings. After the meat and potatoes are taken up, dip off nearly all the grease, set the pan on the top of the stove, stir in a spoonful of flour, and when it is smooth, add milk enough to make gravy.

SPRING IN THE HOUSEHOLD.—The soft air, the showers and bright sunshine, the bluebird and violet are not the only harbingers of spring. All over the land busy housewives are beginning the spring house cleaning. In their ambition to get this work over, stoves are often taken down too early, and discomfort, colds and sometimes serious illness are the result. Unless there is at least one open fireplace in the house the stoves ought not to be removed before the last of May, in the middle and northern states, and if there are young children or aged people in the family, be sure that in at least one room, besides the kitchen, a fire may be built whenever a cold, rainy day comes, as they are apt to do all summer in our uncertain climate.

Of course, we cannot wait until warm weather comes before cleaning house, but we can leave the family sitting-room until the last. Some recommend beginning at the top of the house and working down. This is very well if there is no cellar, but if there is one it should not be left until

the last. Cellar cleaning ought to be the business of the men folks of the family, but many of them do not think of it unless reminded, and by and by the hurry of spring farm work comes on and they will think they have no time for anything else. If for no other reason than this the cellar is the place to begin house cleaning. But there is another and more urgent reason. If warm weather comes on and the vegetables left in the cellar begin to sprout and decay, invisible but noxious gases will find their way into the family living rooms, mixing an element of disease and death with the air we breathe.

To a considerable extent we have the conditions of health for ourselves and our families in our own keeping. If we permit noxious gases from drains and cess-pools, privies, pig-pens and decaying vegetable matter to poison the fresh, pure air of heaven, we have no right to complain when sickness and death comes into our households. Even the chips, if allowed to accumulate and decay, year after year, will exhale disease-breeding gases. Ignorance and carelessness in just such things as these are no doubt the causes of many an epidemic of typhoid fever, diphtheria or some kindred disease which sometimes visits and devastates country homes that would otherwise be the abode of health.

MAIDA McL.

THE UIPIL.

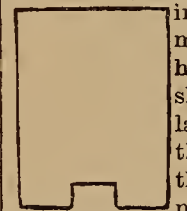
Women who have little time for sewing and little money to spend, can find great comfort in their own room by wearing a uipil. This can be made, even by hand, in less than an hour, and is far more comfortable, as well as more artistic, than any dressing sack. There is no cutting out to be done, and no fastenings are required. The word uipil is from the Maya language spoken in Guatemala, Honduras and Yucatan. The garment thus called



THE WAY TO WEAR IT.

has been in use for many centuries throughout Central America down to Darien. The Maya women, who were, and are yet, renowned for their good looks and fine figures, refuse to adopt any different shaped dress; those who can afford it make their uipils costly with embroidery and lace, though the body of the garment is always cotton or linen, snow white. But the uipil can be made of any stuff or color, and is the easiest, most delightful garment imaginable for warm weather; and for winter, too, if made of woolen goods. Furthermore, it is as easy to iron as a towel. It requires two yards of thirty-six-

THE WAY TO CUT IT.



inch material. In the very middle of the piece cut a hole—round, square or V-shaped, as is liked—just large enough to slip over the head without disturbing the hair. The Mayas always make the opening square. **HOW IT LOOKS WHEN CUT.** Now double the stuff and sew the straight edges together, leaving an opening at each side at the top for the arms to go through. Hem the lower edge, neck and armholes, and all is done. The long, straight shoulder-seam falls nearly to the elbow, serving as sleeves, causing the sides of the garment to hang lower than the back or front, producing folds and the peplum effect. Made of China or India silk, the uipil is lovely, especially when the neck is trimmed with lace. The Maya women put deep lace all around the lower edge and wide, colored insertion above it, as well as around the square neck.

If preferred, the neck could be cut round and much larger, then bound and a ribbon run through it, so as to gather it full at the throat. This shortens the shoulders, and the effect is very pretty. Sleeves could be added, if desired, and a ribbon tied around the waist.

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HINTS FROM OUR CONTRIBUTORS.

Some of our contributors have sent us in some very good suggestions, and we would like to hear from more of them.

EARACHE.—A drop of Jamaica ginger on cotton batting placed in the ear will be found very comforting.

MARY D.

Checto, Oregon.

TO KILL ROACHES.—Take lump borax and pound it as fine as you can, mix it with one pound of sugar; mix both with one quart of corn-meal, add water enough to make a batter, then set it in their haunts in small vessels, being careful to keep it damp, as they suck the water, and that is what kills them. The same results will not come if powdered borax is used.

Pittsburg, Pa.

E. M.

EASTER EGGS.—Some preparation of this kind may be made for the little ones, at very little expense and trouble, while even some of the bigger ones would not despise some of the beautiful goose eggs, laid in thick with violets or heliotrope and tied with the same colored ribbons.

Two large shells could be broken ragged around the top edges, these painted along the edge irregularly in gold paint. Put them in a tiny basket, which should be gilded, fill them with violets or heliotrope from the greenhouse, tie a bow of wide violet ribbon on one side of the handle, and if your best girl wants a prettier Easter egg than that, let her buy it herself. If you are where you cannot get flowers, fill them with small bonbons.

Eggs decorated with funny faces, caps and capes are very amusing, but these are only available when one understands the paint brush; however, many of the advertisements in our newspapers contain pictures that could easily be traced and touched up with water colors to be very attractive.

Cover eggs with mucilage and roll them in rice or cerealine, let them get perfectly dry, then touch up with gold paint and string ribbons through them. The eggs should be blown, and allowed to get perfectly dry before putting the ribbons in them.

For a child, a string of red eggs is very acceptable. These can be hen's eggs. Paint them with geranium lake oil paint, mixed with ceramic glazing. This hardens, and is quite glossy in appearance and a lovely color of red.

Easter favors need not all be eggs; flowers, bonbons, stationery, anything of this kind is appropriate.

By breaking part of the small end off, gluing on a top of silk with a draw-string in it and filling it with very small candies, a pretty favor can be made.

For fun, one can fill the eggs with corn-meal, put plaster of paris over the hole in the end, heat them in the oven, and serve at breakfast with the other eggs. The one who gets this egg will get an Easter surprise at least.

Empty shells can be filled with prepared gelatine jellies with small candies in it, and when set the shell can be removed.

BETTINA HOLLIS.

HOUSEHOLD CONVENIENCES.—I have often thought that of all inconvenient things for a house is the usual kitchen table of the trade. And expensive, too. It is too short, the one little poky drawer in it of no account. There is always a joining of the boards which in a little while shrink away, and when the top is scrubbed the water goes down in the drawer and wets everything there. The New York Times suggests a good idea for one, that of covering the top with tin. I should think this a good plan: Fit a sheet of tin to the top and perforate with holes for putting it on; then around this I should want a molding, to keep the water from going down to the floor. This would do away with a great deal of aggravation, as it would be easier to care for than a wood top.

The following idea for a sewing-room, which we take from the N. Y. Tribune, ought to be in every house. The time and patience wasted hunting the scissors, a particular spool of thread, a button, etc., will never be known:

"The convenience of a special room for sewing can hardly be overrated. It saves many weary steps in hunting for thread, thimble, etc., and saves the family sitting-room from being a resting-place for the sewing. Such a room, described by a correspondent, is 8 feet by 12 feet, with two windows and a small closet. In front of

one window stands the sewing-machine, which has one end of its cover cushioned to use as a foot-stool. On the right is a row of foot-wide shelves running almost the width of the room. These hold all the sewing paraphernalia in boxes, having the projecting ends labeled. They can be read from the sewer's seat at the machine, and are within easy reach. Patterns, left-over pieces, buttons, trimmings, etc., all have boxes and are kept in them. Below the shelves is a low cutting-table always ready for use. A sewing-chair without arms, and having short rockers, is handy, and a straight chair for machine use. In one corner is a dress form, and in the opposite corner is a long, narrow mirror, which shows the effect when fitting on the form. By the door three hooks are screwed, from which hang a well-filled pincushion, pattern-book and slate and pencil. On the slate goes every want of the family in the sewing line as it is thought of. The cost of fitting up such a room is small, as the window has a buff blind, and a rug for the feet is the only floor covering; but the convenience and comfort of such a place is unbounded."

THE BREAD-KNIFE.—Another untold annoyance to everyone who does the carving is to know the carving-knife has been taken to cut the bread. We became the happy possessor of a knife for this purpose not long ago, which is beyond question the housekeeper's best friend. It is light, of good shape to hold, and with a saw-like blade which will cut hot bread, thin bread, any kind of bread beautifully, and the edge keeps sharp. There are three in the set, the bread-knife, one for cake, and a paring-knife, all for one dollar.

I'd save that dollar some way to have it, if I hadn't one.

DUMB WAITERS.—We cannot all have one, but we can plan a step-saver of something else.

Take a large, flat-bottomed splint basket with a good handle, that will take everything that ought to go down cellar at one trip. It can also be used to clear off the table. It tires me out to watch a woman clear a table by taking everything out by itself, when she could, either on a waiter or with a basket, clear the entire table at once.

IRONING.—A lady writing in "The Ledger" says she has found the greatest comfort in the use of mats to stand on while doing her work, made of a dozen thicknesses of carpet lining, covered with drugget. At two corners are loops to hang them up by when not in active use, or when the sweeping is being done.

We must husband our strength in some way when so great demand is made upon it, and the continual return of household duties are trying enough at best, we ought to take advantage of every available help.

CHRISTIE IRVING.

"UP-STAIRS AND DOWN-STAIRS AND IN MY LADY'S CHAMBER."

There is no theory of system and order and no expenditure for labor-saving utensils and materials that can make the annual siege of house cleaning other than a disagreeable and wearisome duty for the majority of housekeepers. And yet when it is completed, and cleanliness predominates "up-stairs and down-stairs" and out of doors, and all our old furnishings have been renovated and made to look their very best, if we can invest in a few, or even one new thing to add to the comfort and attractiveness of our home, the disagreeable features of the work are soon forgotten.

With the majority of housekeepers this last-mentioned outlay must be small, and months of hoarding are often necessary to the accumulation of even a few dollars (for dime savings banks are teaching economy to many adults as well as children), and their expenditure should always be given proper consideration.

Whether it were better to invest it all in some one article, or to spread it over several rooms, each housekeeper must decide for herself. Sometimes there is no one prominent need, and the expenditure of a dollar here and there will give the whole house a "dress-up" air.

If it is a carpet you need, buy the best of its kind, or none. A nice quality of matting is pretty and serviceable for chambers, but do not purchase any but the best quality of ingrain carpet for a living or sitting room. Better turn and patch the old one or hide its worn places

with rugs for another year than to waste your money on hemp or cheap ingrain carpets; and if body Brussels or moquette are beyond your means, get ingrain for the parlor also. They are woven in Brussels designs, with borders to match, and in all the beautiful art shades of the most expensive carpets, and a tapestry Brussels is a delusion and a snare.

A border adds somewhat to the expense of a carpet, but gives it a decidedly more finished, handsome look. The custom now prevalent and constantly gaining in favor, of leaving a space of from eight to twelve inches between the edge of the carpet and the baseboard, is one of the most sensible ones possible; and all rooms in ordinary use should have a border painted or stained to correspond with the ground work of the carpet and be treated in this way. This leaves no place for dust to lodge, and by expending five minutes each day in running a sweeper over them, no weekly upheaval of a "sweeping day" is necessary.

The feeling that prompts every housekeeper to want a handsome parlor and guest-chamber is a laudable one, but do not put these *wants* before the *needs* of yourself and family. If a new clothes-wringer or carpet-sweeper is needed to save your already overtaxed strength, do not, I beg of you, do without them and buy lace curtains or plush-cushioned rockers.

If the "home force" can compass the hanging successfully, there is nothing that, for the same expenditure, will beautify and furnish a house as effectually as well-selected wall-paper, and with this, as with carpets and nearly all fabrics, as artistic designs and colors are used with cheap as expensive qualities. After repapering a room, if there is no picture molding you can easily add one. And either wood molding to match the finish of the room or a metal one costs but a few cents a foot, and are a wonderful convenience.

In rehanging pictures, remember that another one of fashion's sensible decrees is, that parlors and reception-rooms are not appropriate places to display family photographs, and that one really good picture has a more refining and educating influence than a room full of inferior ones. And this need not be an expensive one. Copies of the most celebrated works of all great artists can be had in engravings, and the various processes of photography, as cheap as one dollar, and even less for small ones.

With all due respect and appreciation for the housekeeper who ingeniously contrives "ways and means" to utilize all the resources at her command, and the possibilities of dry-goods box and home-made furniture in general, I must say that the woman who can wield a saw and hammer must be guarded lest she expend as much in making, draping and bedecking this sort of furniture as would, by purchasing one or two pieces at a time, soon furnish her house in a far handsomer and more substantial manner. The woman who can do this kind of work nicely need not hesitate to buy furniture at a factory and finish it off herself with enamel paint, oil or varnish, or to buy chairs, a tete-a-tete or divan in muslin covers and upholster them herself at a decided saving.

Draperies give an artistic finish to a room that nothing else can, but do not buy coarse, white Nottingham lace curtains when so many handsomer fabrics can be had at no greater expense. If you prefer white or cream tints, there is plain and lace-striped linen scrim, and dotted and embroidered Swiss muslin. But much handsomer effects are obtained with silk-oline or Madras muslin, which come in floral designs of soft, delicate colors on a background of contrasting, light tint. The best quality of the latter-named goods, which costs forty cents a yard, launders very nicely and retains its colors well. They drape almost as handsomely as silk, and may be made up plain or edged with a narrow, cotton, tassel fringe.

Prepared dyes will make many an old ribbon, silk handkerchief and scarf pretty enough to use as curtain-loops, lamp-shades and scarfs, and I recently saw a felt table-spread, elaborately embroidered, infilled in Kensington stitch with crewels and silks, that had become so faded as to be useless, made really beautiful by dyeing it carefully with olive-green Diamond dye and pressing thor-

oughly on the wrong side. The different colors and shades of the embroidery were distinct and pretty.

Don't forget to refill or make new piazza cushions, for both the chairs and floors, and cover them with denim, figured Turkey-red or other serviceable material, for you know you have promised yourself to live out of doors more the coming summer than ever you have before.

And if you are not well supplied with screen doors and windows, buy a piece of mosquito netting, and when you have finished house cleaning fit a piece nicely to every window. This can best be done from the inside, and if the edges are hemmed or a narrow strip of cloth carried along the edge to tack through, they will last perfectly during the entire season.

KATHERINE B. JOHNSON.

FACETIE.

A RHYME FOR EASTER.

Nor bud nor leaf need I to know
When spring arrives in town;
I find it safe enough to go
By Phillis and her gown.

When I behold this dainty lass
Come forth all fresh and fair,
I know that then the spears of grass
Are showing on the square.

And when in Phillis' bonnet's plume
I spy a spray of pink,
I'm sure the crocus is in bloom
Around the fountain's brink.

So bring no prosy almanac
My Easter dreams to mar;
With Phillis near, I nothing lack;
She is my calendar!

SOME PICTURESQUE FROCKS.

A writer in the *Housekeeper's Weekly*, "E. M. I.," says:

"I have just completed a charming costume for my little daughter, who is a perfect blonde, and it is so picturesque and I am so pleased with my work—for be it known that I created it—that I have decided to describe it to the readers.

"It is composed of a fine, dark blue wool goods, combined with dark blue velvet and narrow silver braid. The skirt is very full, and finished with a deep hem. It is simply gathered to the short yoke. The front of this yoke is of the wool, with a large box-plait under which the dress fastens. The back of the yoke is of velvet. In front are tiny jacket fronts of the velvet. These are quite short and rounded. They meet the yoke in the under-arm seams. A narrow choker completes the neck.

"The bishop sleeves (of the wool) are perfectly straight, gathered very full in the armhole, and at the wrist into a velvet band, large enough to slip easily over the hand. Over the sleeves are velvet caps which reach to the top. These are slashed half way to the top. A wide sash of the wool goods starts from the under-arm seams, and when tied reaches to the hem of the skirt. This sash looks very quaint, tied in a loose knot high in front. The ends of the sash, the jacket fronts, the back of the yoke, the sleeve-caps, collar and cuffs are all edged with the silver braid.

"To wear with this costume is a big felt hat with irregular soft brim, trimmed simply with a wreath of silver wheat.

"The Marguerite is a thoroughly sensible and comfortable dress. For a girl of twelve, the skirt of dark red and blue plaid is perfectly plain. The bodice of the plaid is very full, shirred at the neck and waist. Over this a girdle is worn, which reaches half way up under the arms. It is straight along the upper edge, with a point back and front on the lower. This girdle is of dark blue velvet. The close-fitting sleeves are of the plaid, with a large puff of the velvet at the shoulder. The girdle and puffs on the sleeves are edged with the guimpe. The trimming on the hat is just a big, soft bow of broad, blue velvet ribbon and two tiny red tips.

"Another costume for a little brunette is of the richest, clear red wool. The bodice (closed in the back with hooks and eyes) has a wedged-shaped piece of black velvet in the center of the front; on either side the goods is laid in tiny plaits. The back has a velvet yoke, and below the goods is in three backward-turned plaits. The skirt is full and is shirred to the waist, and is finished with a broad hem and two rows of black velvet ribbon. The sleeves are of the red goods, full and high, with a deep velvet cuff. The collar is of the velvet."

And also the following, which we give our readers from the *Tribune*, may be of help in arranging spring combinations. I have never used velveteen for dresses, but it and corduroy are quoted so frequently in Eastern papers that it must be in high favor. It certainly can be recommended for good wearing qualities.

"The little dress under discussion was made like the accompanying sketch, and was of dark, plum-colored velveteen. A very broad belt of gathered surah, of the same color, is fastened with hooks and eyes in front, one end being left to form a full ruffle. The sleeves are tight from the elbow to the wrist, the upper part be-



ing full and gathered into the lower half at the elbow. A tiny plaited ruffle of dark-red silk, which is sewed just under the hem of the skirt, and red silk stockings of the same shade give a touch of brightness to this otherwise rather somber costume."

A lady who has used the divided skirt for her little girl all winter likes them so well that she will make them of pongee or gray alpaca for summer wear. She does not use a pattern, taking just four breadths of pongee, and sewing seams in two of them, she sews the other two seams up one third, then puts in a square gusset, a quarter of a yard square, making the bias come crossways; this forms a *give* to step in, and when they are finished with rubber bands at the knees and plaited to a waistband opening in front, with a short vest, they are close and very comfortable. The little girl remarked one day when she was asked to don her skirts for one day while the "divided" were under repair, that she "felt like a feather-bed with a string around the middle, and never wanted to be asked to put on petticoats again." For winter she wears twilled navy blue flannel. Under these she wears her union suit in winter, and in summer white muslin drawers, or a union suit of balbriggan. Her mother will include very few if any wash dresses in her summer wardrobe, preferring light wools, and India silk for better wear. If some of you mothers will stop to count the cost of a half dozen wash dresses, the making, the trimming and afterwards the laundering, you will be surprised to know you can buy a very expensive wool or India silk, or perhaps two, for the same price, and it will do the one season without laundering, and clean beautifully for another.

Ginghams of less price than twenty-five cents are getting to be worthless to buy, as they shrink and fade so badly. Those at forty cents wear like silk, but one hesitates to pay that for a dress that must be handed over to the cruel mercies of the wash-woman who puts pearline or soda in the water the moment your back is turned, though she vows she used only the soap you gave her.

Dresses of pongee, the natural color, are very serviceable, even for quite small children, as it washes so beautifully.

L. L. C.

YOU CAN BREAK UP A BAD COLD by the timely use of Dr. D. Jayne's Expecto-rant, an old and popular medicine for Sore Lungs and Throats, and the best of all Cough remedies.

A GENTLEMAN.

What most characterizes a gentleman is thoughtfulness for others. A true gentleman does not allow himself to annoy any person with whom he is on good terms. He not only refrains from saying or doing anything which he knows is questionable, but he also refrains from anything which others may consider questionable. He places thoughtfulness above self-gratification at home or abroad.

We owe many of our modes to the infirmities of royal personages. Royal lameness led to high heels, a wen on a regal throat to the adoption of ruffs, and yet even kings and queens have been powerless to alter the dictates of the tyrant Fashion.

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Our Household.

HER FRIEND.

"Twas in the Boston fast express a little maiden sat;
She occupied the seat alone; beside her lay her hat.
She clutched her dolly to her breast in childish mother play,
As if she feared some dreadful giant would snatch it right away.
"Are you alone, my little girl?" I asked as I stooped down.
"My mamma told me Dad was here!" she said with half a frown.
"She kissed me and my dolly, and I dess I don't know you."
"But, dear," I answered, smiling, "tell me where you're going to."
She twisted in her seat, and then she tossed her tangled hair.
"I'm doin' on to Boston, and my pop'll meet me there."
"But, dear," I questioned gently, "if the choo choo cars should stop,
"And you should walk, and walk, and walk, and then not find your pop,
"What would you do?" The little maiden shook her head and frowned.
"My mamma says when pop is gone, that Dad is somewhere 'round."

The train rolled into Boston town. I waited there awhile
And watched my little blue eyes, with her half expectant smile.
"Dess waitin' for my pop," she said, "with dolly fast asleep."
And then a man came rushing in; I knew him by his leap.
He snatched his little daughter up with frantic, feverish glee;
And then, with father's instinct, quick his eye was turned on me.
"Well, Bess," he asked, "who is your friend?"
With quaint, expressive nod
The maid replied: "I dess I know. I fink it mus' be Dad."
—Tom Mason, in *Brooklyn Life*.

OF INTEREST TO WOMEN.

WOMEN are employed on all the leading London papers. The entertaining column in the *Telegraph*, called "London Day by Day," is largely the work of a woman. Miss Emily Faithfull was one of

the pioneer workers in this line, and thirty years ago conducted a magazine with a corps of woman printers.

Rev. Florence Kollock, of Englewood, Ill., during her sixteen years of pastoral work, has never had to be absent from the pulpit a single Sunday on account of ill health. This is a record which few ministers, either men or women, could parallel.

Chicago has a woman's baking company that has been incorporated with a capital stock of \$250,000. The company is composed of Christian Temperance Union women, and they are not only to run the concern on strict business principles, but also to use only the purest materials, and to have the work done entirely by women.

"When we were in the North seas," said the whaling captain, "we frequently traded blubber for sealskins."

"That's nothing," said Bond; "down in the North river region my wife worked the same racket on me."

The tallest woman in the world is the giantess Rosita, who was born in Vienna twenty-six years ago, and is now on exhibition in Berlin. Her height is eight feet three inches, and she weighs 351 pounds.

Novelties in thimbles are of china in Royal Worcester, Dresden and Trenton manufacture. These thimbles are white with a garland of colored flowers on the border.

GOING TO BED HUNGRY.

Dr. W. T. Cathell has entered a strong protest against the old-fashioned idea that people should go to bed comparatively hungry. He is of the opinion that fasting during the long interval between supper and breakfast, and especially the complete emptiness of the stomach during sleep, adds greatly to the amount of emaciation, sleeplessness and general weakness so often met with. It is well known that in the body there is a perpetual disintegration of tissue, sleeping or waking; it is, therefore, natural to believe that the supply of nourishment should be somewhat continuous, especially in those in whom the vitality is lowered. As bodily exercise is suspended during sleep, with wear and tear correspondingly diminished,

while digestion, assimilation and nutritive activity continue as usual, the food furnished during this period adds more than is destroyed, and increased weight and improved general vigor is the result. All animals except man eat before sleep, and there is no reason why man should form an exception to the rule.

Dr. Cathell is satisfied that were the weakly, the emaciated and the sleepless to nightly take a light meal of simple, nutritious food before going to bed, for a prolonged period, nine in ten of them would be thereby raised to a better standard of health. He has found that after digesting a bowl of bread and milk or a mug of beer and a few crackers, or a saucer of oatmeal and cream before going to bed, for a few months, a surprising increase in weight, strength and general tone has resulted. Persons who are too stout and plethoric are recommended to follow an opposite course.—*Philadelphia Press*.

ABOUT KITCHEN TABLES.

Housekeepers who have never had a tin-covered table for kitchen use are still unacquainted with one of the most valuable articles of domestic economy. An ordinary kitchen table takes kindly to the metal cover. Fit a sheet of tin on the table and perforate the edges for tacking. The tin should cover the thickness of the board top, that it may be tacked on the underside of the table. A table so covered needs no scrubbing, is impervious to hot kettles, sheds grease as the proverbial duck's back does water, and in fact cheers the heart of the kitchen-maid more than anything on earth, except her wages and her "company." The woman who does her own work should not let another dawn find her without one. Said a wise family man: "Anything which simplifies the domestic labor of the household should be regarded as of distinct benefit to mankind," and he was speaking of a tin-covered kitchen table upon whose virtues his wife was dilating. A fair and cheap substitute is found by covering tables with the marbled cloth sold sometimes for washstands and children's bibs. It was Mephistopheles himself who designed kitchen tables out of soft, pine boards. With their absorbent and spreading qualities, a tiny drop of grease is quickly converted into an unsightly blotch, and a hot handle or kettle sears its indelible mark across their surface.—*New York Times*.

PUT BABIES IN BAGS.

"Do you ever put your babies to sleep in bags?" asked an old nurse, as she tucked in a family of little ones for the night. "If not, I will give you a point that you may sometime find useful. I had one time in my charge a very delicate infant. It seemed to have little vitality and very poor circulation, and it was impossible to keep the little thing warm. It was also very nervous and restless, and needed constant watching, else it would kick itself out of all its wrappings. I taxed my brain for a long time to think of some way to keep it thoroughly protected, until finally I hit upon an idea. I bought a yard and a half of moderately thick felt, folded it over, leaving the folded portion for the foot of the bag, then shaped out the top in a sort of nightgown fashion. I sewed strong tapes on the edges, put the little one into the bag and drew up the strings. The felt came close to the throat, but not so close as to be at all annoying. A little cap of soft, thick wool was provided, and you would have been surprised at the child's improvement. I kept the little thing in the bag the greater part of the time for three months, night and day, then it came on very warm weather, and I gradually left open one tape after another until I could leave it off altogether. I used to say that that child gained a pound a week, and I really think she did."

"FRUIT MANNERS."

"Fruit manners," as a girl aptly designates them, are a distinct department of table etiquette. Strawberries, hulled, are eaten with spoon or fork; unhulled, are taken in the fingers separately and daintily and dipped in sugar before being conveyed to the mouth. Apples, pears and peaches should be divided before being attempted in mouthfuls—although a ripe pear may be halved and eaten with a spoon. The same utensil should be em-

ployed with melon, though a fork which has one tine slightly broadened is often seen for this fruit. At English tables spoons are served for bananas as well, although when these are served as a single fruit course sherry or claret is usually sent around with the whole fruit. A few drops are poured on the plate, and the banana, stripped of its skin, is dipped in the wine and thus eaten.

Oranges seem to offer as many methods of eating as there are varieties of the fruit. The Florida fashion of halving it across the grain and taking out the juice and fine pulp with a dessert-spoon is a neat way, and gives one all the desirable part of the fruit; some eat an orange quite as daintily by tearing it in small sections and taking the fruit in mouthfuls; this method needs a little practice before being attempted at formal tables, as the inexperienced, with a juicy Havana or India river, speedily gets himself into trouble.

PATENT LEATHER SHOES.

Patent leather is very delicate, especially when new, and in cold weather a very slight pressure will crack it, so that before putting the shoes of this leather on they should be placed before the fire, not too close, for a very short time, in order to make the leather pliant. Patent leather shoes should be rubbed to the shape of the foot with the hand, and they will not then be so liable to wrinkle and crack when wearing. When they are getting dull and losing their gloss, rub white of eggs on them.—*Good Housekeeping*.

WHAT SALT WILL DO.

A little rubbed on the cups will take off tea stains. Put into whitewash, it will make it stick better. As a tooth-powder, it will keep the teeth white and the gums hard and rosy. It is one of the best gargles for sore throat, and a preventive of diphtheria, if taken in time. Use salt and water to clean willow furniture; apply with brush, and rub dry. Salt and water held in the mouth after having a tooth pulled will stop the bleeding. Prints rinsed with it in the water will hold their color and look brighter. Two teaspoonfuls in half a pint of tepid water is an emetic always on hand, and is an antidote for

poisoning from nitrate of silver. Neuralgia of the feet and limbs can be cured by bathing night and morning with salt and water as hot as can be borne. When taken out, rub the feet briskly with a coarse towel. Salt and water is one of the best of remedies for sore eyes, and if applied in time will scatter the inflammation. Silk handkerchiefs and ribbons should be washed in salt and water, and ironed wet, to obtain the best results. As a fertilizer, salt is very valuable. Food would be insipid and tasteless without it. Hemorrhages of the lungs or stomach are promptly checked by small doses of salt.

HAPPY HOUR.

Does not the following from the *Kinder-garten* contain a useful suggestion for mothers? A dear, domestic circle, consisting of father, mother, a little girl and boy, have established what they term their "happy hour," which is the hour immediately following the evening meal and previous to the happy "go-to-sleep" hour. The father in one room takes the boy on his lap, the mother in another the girl, or *vice versa*. They read, talk or sing, as the mood leads them, in a quiet, peaceful, restful manner. Sometimes the children tell what they have been doing or thinking during the day, or what was read or told them the night before; then the mother and father read, sing or talk to them, putting them to bed with some happy thought. In this manner they go to their sweet and natural rest in a sweet and natural way, leaving their parents with the evening free to take up other pleasures, duties or studies. This "happy hour" is a time to look forward to with eager expectation by both child and parent.

A SPANISH METHOD OF LURING SLEEP.

Cures for insomnia are very numerous, and before any man could try them all he would be asleep forever. A way for putting young children to sleep is of Spanish origin. It requires that the back from the neck to the waist be gently rubbed.—*Chicago News*.

Sprinkle cayenne pepper in the resorts of rats, and they will leave the premises.

"BIG MEDICINE!"

Exclaimed the savage spoiler on the African battle-field, when rifling the poor soldier's knapsack.



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Our Sunday Afternoon.

THE DIVINE EXAMPLE.

When God gave man his heritage
Of tree and plant and vine,
That healthful fruit and beauteous flower
Should for his joy combine,
'Twas not that he each blessing fair
Might to a curse transmute,
And to a poison-goblet turn
The juices of the fruit.

Upon the thousand verdant plains
Where May her seed-hymn sings,
For quenching thirst of man and beast
There gush health-giving springs.
No poisoned chalice Nature holds
To thirsting mortals' lips,
No maddening potion to destroy
Or Reason's powers eclipse.

—Dexter Smith.

THEOLOGICAL SUPPRESSION OF SCIENCE.

Why the people at large took this view is easily understood when we note the attitude of the guardians of learning, both Catholic and Protestant, in that age. It throws great light upon sundry claims by modern theologians to take charge of public instruction and of the evolution of science. So important was it thought to have "sound learning" guarded, and "safe science" taught, that in many of the universities, as late as the end of the seventeenth century, professors were forced to take an oath not to hold the "Pythagorean"—that is, the Copernican idea—as to the movement of the heavenly bodies. As the contest went on, professors were forbidden to make known to students the facts revealed by the telescope. Special orders to this effect were issued by the ecclesiastical authorities of the universities and colleges of Pisa, Innspruck, Louvain, Douay, Salamanca and others. During generations we find the authorities of these universities boasting that these godless doctrines were kept away from their students. It is touching to hear such boasts made then, just as it is touching now to hear sundry excellent university authorities boast that they discourage the reading of Mill, Spencer and Darwin. Nor were such attempts to keep the truth from students confined to the Roman Catholic institutions of learning. Strange as it may seem, nowhere were the facts confirming the Copernican theory more carefully kept out of sight than at Wittenburg, the university of Luther and Melancthon. About the middle of the sixteenth century there were at that center of Protestant instruction two astronomers of a very high order, Rheticus and Reinhold; both of these, after thorough study, had convinced themselves that the Copernican system was true, but neither of them was allowed to tell the truth to his students.—*Andrew D. White, in the Popular Science Monthly.*

FISHING FOR SOULS.

A poor, half-clad boy was fishing for trout. With amazing success he kept drawing in the fish. A student sat upon the hillside watching the boy. He returned to his boarding-house, and in a half hour was back at the stream, adjacent to the boy, having with him new fishing tackle with modern appliances, excellent bait, etc. The student threw out his line, but did not get a single bite. He changed his position closer to the boy, fished another hour, and no success whatever. He then drew near to the side of the creek, seated himself upon a convenient rock, and patiently held his fishing-rod, now and then examining his bait, until all the afternoon had passed away, and he caught nothing.

Just as the boy was about to leave with his "big haul," the student exclaimed:

"My young fellow, how is this? I've caught no fish, and yet I have splendid tackle. How is it that you, with your rude fishing-pole and twine string, catch the fish?"

The boy replied: "It is not my old fishing-rod, nor twine string, nor the bait, nor the hook that make the trout bite; but I kept hiding myself under the bushes while I was fishing. The fish will not bite, and you won't catch 'em, so long as you don't keep yourself out of sight."

The illustration and application of this incident is a peculiarly suggestive lesson for those who are "fishers for men."

One may have culture, intellectual endowments, style of address, elocution, reasoning powers, rhetorical attractions and admirable gifts, winning much attention to themselves, and wonderful words

of encomium and praise about themselves, yet prove to be dead failures so far as winning souls to Christ is concerned.

In all work for Jesus, reader, "keep yourself out of sight." Let the people see "Jesus only."

BE YE THANKFUL.

Such is Paul's injunction to the Corinthians. The great antecedent of this thankfulness is to be noted: "And let the peace of God rule in your hearts." Out of such hearts, made pure, and when the peace of God has rule, will ever flow streams of thankfulness. God's mercies, "new every morning, and renewed every evening," will keep such a heart in an attitude of constant praise and thanksgiving.

For lack of this spirit of thankfulness many Christian lives are very barren. Thomas Fuller says: "Many favors which God giveth us ravel out for want of hemming, through our own unthankfulness; for though prayer procureth blessings, giving praise doth keep quiet possession of them."

Let us see to it that God's favors do not "ravel out," as this old writer says, but let us by praise and thanksgiving hold possession. The mercies of our God are great. He daily "loadeth us with benefits." "He crowneth us with loving kindness and tender mercies." Let us take an inventory of our blessings, compute our riches, and render to God suitable offerings of praise and thanksgiving.—*Christian Standard.*

WHEN AND WHAT TO READ.

If you are impatient, sit down quietly and have a talk with Job.

If you are just a little strong-headed, go to see Moses.

If you are getting weak-kneed, take a look at Elijah.

If there is no song in your heart, listen to David.

If you are a policy man, read Daniel.

If you are getting sordid, spend a while with Isaiah.

If you feel chilly, get the beloved disciple to put his arms around you.

If your faith is below par, read Paul.

If you are getting lazy, watch James.

If you are losing sight of the future, climb up to Revelation and get a glimpse of the promised land.

WORDS IN ANGER SPOKEN.

Did you ever stop to think how far a touch of ill-nature travels? If you speak crossly to a man he will show his anger in talking to the next man, who will pass his irritation on to another, and it will keep on traveling, affecting dozens of people, until it strikes some very good-natured person, who will stop it by laughing at it. It would be very pleasant if every man who gets angry could remember this, but no man who is angry remembers anything but his wrath.

A HIGHER HAND.

A little boy sat in front of his father and held the reins that controlled a restive horse. Unknown to the boy, the reins passed around him and were also in his father's hands. He saw an occasion to pull them. With artless simplicity the child looked around, saying, "Father, I thought I was driving; but I am not, am I?" Thus it is often with men who think they are shaping a destiny which a higher hand than theirs is really directing. They do their own will because it is also the will of God. A stronger hand guides them; a mightier power holds the helm of their vessel, and saves from rock and wreck. Happy are they who yield to the guidance of the Almighty hand.—*Golden Words.*

HOW MUCH?

How much money, thought and time do we actually give for our religion? The heathen shame us by their gifts in the service of their gods. A statement is made by Rev. Mr. Noyes, of Canton, that \$200,000,000 are spent annually on ancestral worship alone. He found that the ratio of gifts to income in the case of several families about which he inquired ranged from one fifth to one third, and that in no case were the gifts so small as a tithe. Yet we know that the vast majority of the Chinese are wretchedly poor, living from hand to mouth. To say that it is impossible for Christians to give a tithe, is to say that they cannot do for Christ what the heathen do for their idols.

Three Danger Signals

foretell the approach of Pulmonary Consumption. The rattle-snake never strikes its fatal blow until after its note of warning has been given; so with Consumption; the attack of this dread and insidious foe is preceded by EMACIATION, loss of flesh without sufficient sick symptoms to account for it. A COUGH; slight, perhaps; a mere habit, the patient says, which he can and must prevent; doubly ominous if continuing through warm weather. UNEQUAL DEPRESSION beneath the collar bones. Tubercles almost always invade one lung, and at its apex. The one attacked soon contracts and the flesh above it shows a greater depression than over the other.

These are the signals. Where is the remedy? Will any drug supply it? Observation (and too often experience) makes you answer no. More than 20 years ago we said that our COMPOUND OXYGEN would help in a manner and to an extent far exceeding any other agent known to man. We say so still; but it is not our word only now. Scientists admit it; physicians prescribe and take it; and better still, thousands of people everywhere, stepping aside from the crowded path of hoary failure, have tried it themselves and are living to-day, glad to tell of its great power to rebuild the system, the gradual consumption of which it is that we call Consumption.

If a person has seen one or all of these signals; if he wants help rather than sympathy; if he can weigh and believe the evidence of others, we would like him to send for our 200-page book of explanation and of proof. ENTIRELY FREE.

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Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Book on Broom-corn Culture.—L. D. J., Batesville, Miss. This office can furnish you with a good book on broom-corn culture for 50 cents.

Orchard-grass and Clover.—H. V., Hally, Idaho, asks if it is practicable to sow orchard-grass with clover. Certainly. It is better to sow with clover than timothy, for the reason that they bloom together. After the clover dies out the orchard-grass will have possession of the ground.

Baling New-mown Hay.—A. J. C., Dickison, N. D., writes: "I. F. K., Dunlap, Ill., wants to know if new-mown hay will keep if baled as soon as cured. I do not know anything about the hay there, but out here we bale it in the field. Most of it is raked up and hauled to the press with the horse-rake. It keeps all right."

Fertilizer for Lettuce.—E. D. W., Galesburg, Ill., asks whether nitrate of soda is good for lettuce under glass, and how much should be used. It is very doubtful whether good effects are obtained from its use on forced lettuce. Usually the soil in greenhouses and frames is rich enough for lettuce growing. I know of no special work on lettuce forcing.

Alfalfa.—W. I., Phoenix, Ariz., writes: "After sixteen years' experience raising alfalfa, I would not sow more than ten pounds to the acre, if the seed was furnished me gratuitously. If that amount all germinates, it will be about ten times thicker than necessary. Put the land in thorough condition, harrowing it lightly. Where alfalfa hay can be raised, it will supplant silos, as it is near enough green feed for all practicable purposes. Sow about corn-planting time."

To Repair Looking-glass.—M. F. R., Amsterdam, N. Y. On a sheet of tin-foil pour about three drams of quick silver to the square foot. Rub with a chamois skin until the foil becomes brilliant. Place the glass upon a flat table, face downwards, put the foil upon the damaged portions of the glass, lay a sheet of paper over the foil, and put upon it a flat board weighted sufficiently to press it down tight; let it remain a few hours and the foil will adhere to the glass.

Brewery Hops and Grains.—W. J. M., Fort Edward, N. Y., asks about the value of brewery hops and grains when well composted. Will they make good manure?

REPLY BY JOSEPH:—Brewers' grains contain about 18 per cent nitrogen, 6 per cent phosphoric acid, and 10 per cent of potash per ton, consequently are worth nearly \$4 per ton, and when well composted will make a good, rich manure. Hops, when treated in same manner, are probably worth about as much as stable manure.

Leaky Cistern.—J. B. B., Elk Point, S. D., writes: "We are having much trouble with our cistern, although it is comparatively new. It is bricked up and cemented but will not hold water. We have had it repaired a number of times. What are the proper proportions of cement and sand? I think that must be the trouble."

REPLY:—One part Portland cement to two parts of clean, sharp sand, free from clay or dirt, is the mixture that should be used. Examine your cistern and see if a small vein of water is not coming in from the outside and making a hole in the cement coating.

Nitrate of Soda as Fertilizer.—G. S. G., Easton, Conn., asks: "Would nitrate of soda benefit rye sown last fall? When should it be applied, and how much per acre? Would the same substance be good for meadows? When should it be applied, and how much per acre?"

REPLY BY JOSEPH:—There may be cases when the application of nitrate of soda on the crops named would pay, and the inquirer might test it on a small scale. Under ordinary circumstances I hardly think it would pay, although it might show some results. Apply in early spring, say one hundred or one hundred and fifty pounds per acre.

A New Tomato Disease.—J. H. C., Ellensburg, Wash., writes: "What is the matter with my tomatoes? I set out nice, thrifty plants, and when about a foot high, they stopped growing, turned yellow and died. There was no insect found on leaves or in the stalk."

REPLY BY JOSEPH:—This is a new disease, the nature of which is not yet fully understood, and no remedy has been found, except, perhaps, shading the plants. It is undoubtedly the same disease that has destroyed so many of our cucumber and melon vines in recent years. Putting a handful of hay thinly over the hills has seemed to act as a preventive of the attack. The Bordeaux mixture and ammoniacal solution of carbonate of copper should be tried.

Oats and Peas—Blue-grass Seed.—J. P. D., Sioux City, Iowa, writes: "Please state when to sow oats and peas, how much to sow of each kind and what kind of peas to sow?—Also, what kind of blue-grass seed would be best suited to high land in this part of Iowa?"

REPLY:—Sow the oats and peas, two bushels of each to the acre, about the first of April, or at your usual time of sowing oats. You can sow them broadcast. You may sow the peas on the rough ground before harrowing the first time, and the oats after. It is difficult to get the peas well covered by harrowing. If you have a good grain-drill that will sow them, use that, and then cross-drill in the oats. For this purpose get the field peas, sold by nearly all northern seedsmen.—We think the Kentucky blue-grass would suit you best. Your state experiment station at Ames could probably tell you what grass is best suited to your upland.

Lettuce Mildew.—Mrs. J. T. F., Bedford, Ill., sends some lettuce leaves affected by mildew, and writes: "I have a greenhouse full of lettuce affected in the same way. What can I do?"

REPLY BY JOSEPH:—The trouble is lettuce mildew. It attacks the leaves, causing yellow and brown spots, and killing the leaf in the end. Prof. Maynard, of the Massachusetts State Experiment Station, advises to grow the crop at a low temperature—35 to 40 degrees at night, and 50 to 70 degrees during the day—to give an abundance of plant food and water, and applying the latter only in the morning and on bright days. Avoid sudden extreme changes of temperature. Sulphur fumes are recommended as a remedy. Put brimstone

into an iron kettle, and keep this over an oil-stove in such a manner that the stuff will keep boiling but never get hot enough to catch fire. If you are careless, and let the sulphur burn, it may ruin every plant in the house. Continue until the fumes can be seen and smelled, and repeat as often as may be needed.

Dairy Queries—House Plants in Bedroom.—H. H. T., Thorp, Wis., asks: "(1) At what temperature should a milk-room be kept to secure best results as to cream, and how long should it take the cream to rise, providing the right temperature is maintained? (2) What is the proper amount, by weight, of dairy salt to use in salting a pound of butter?—Are house plants in the bedroom detrimental to the health of the occupants?"

REPLY:—(1) If the milk is put in deep cans placed in water at a temperature of 40° to 50° Fahrenheit, the cream will rise in twelve hours, or between milkings. If you follow the old way of setting the milk in open pans on the cellar or spring-house floor, we advise you to abandon it at once, and get a good creamery. It will save you an immense amount of labor and enable you to make a better and more uniform article of butter. If you cannot get ice, plenty of spring or well water, at a temperature of 55°, will make a success of the deep setting method. (2) Salt to taste with good dairy salt, one half to one ounce to the pound.—No, if the bedroom is properly ventilated, as it should be whether you have plants in it or not.

VETERINARY.

Conducted by Dr. H. J. Detmers, Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. DETMERS, 35 King Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column, must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered under any circumstances. This time half a dozen anonymous inquiries found repose in the wastebasket.

Phimosis.—M. L. P., Flagg, Ogle county, Ill. Your colt suffers from phimosis. The treatment, at least in your case, requires a surgical operation. Hence, you will have to call on a competent veterinary surgeon.

Can't Get Butter.—W. L., Point Isabel, Clermont county, Ohio, writes: "I have two cows that have been long in milk. They give enough milk to make a good deal of butter but we cannot get any butter. I feed them on ground corn and shucks. Can you tell me what to do so I can get butter? They have been so for one month."

ANSWER:—Referring you to the answer given to Mrs. L. R., in this same issue, I venture the additional remark that the milk of your cows may be too old.

Bloody Urine.—A. D. T., North Bend, Ohio. Bloody urine (hematuria) may have several causes, which to enumerate would lead too far. Still, since your cow is otherwise well, eats well, and has not fallen off in flesh, it is probable that in your case the cause consists in the presence of some stone or concretion in the bladder. If a careful examination through the rectum confirms my opinion, a surgical operation will be required to remove the stone or concretion; but even then it may be more advisable to fatten the animal and to convert her into beef.

Colic.—S. L. A., Emmett, Idaho, writes: "My mare was taken sick six days ago. At first she would paw, roll, lie down, and lie on her back mostly. She seemed to be in great pain. She has a hard lump on her breast which is very sore. She has not had a passage although we have given her a pound of soda and three quarters of a pound of salts."

ANSWER:—Your mare suffered from colic, which terminated in inflammation of the intestines, and, maybe, peritonitis. If she has been sick six days at the date of your letter, on the 7th inst., she undoubtedly is dead before this, or, if not, has recovered and don't require any treatment.

Blind Stagers.—E. T. M., Beloit, Ohio. So-called blind staggers is caused by abnormal pressure upon the brain, which in most cases is brought about by an accumulation of serum in the lateral ventricles. It is chronic, and without fever or any acceleration of the pulse, which latter is often considerably slower than is normal. These are the principal symptoms distinguishing blind staggers from inflammation of the brain or brain fever. The latter, however, often precedes the former. If you want all the symptoms, etc., you will get them in almost every work on veterinary pathology. Time and space forbid to give a lengthy treatise on any one disease.

In a Bad Condition.—S. D., Edgerton, South Dakota, writes: "I have a seven-year-old horse, very poor and rough-coated, that has little lumps on his nose. His breath smells bad. He makes very little water at a time, and has a languid, awkward gait. The hide sticks tight to the ribs. He has a poor appetite."

ANSWER:—Your horse, it seems, is in a bad condition. The proper thing would be to have the same examined, and if worth while, treated by a veterinarian. If none is available, I cannot help you, because it is utterly impossible to prescribe for such a case from a distance, and without any examination.

The Milking-tube.—C. R., Plainwell, Mich., writes: "My cow was fresh two months ago, and we put a calf to her a week. When we took the calf away from her she got a swollen bag and dried up. She also had a chill. We milked her with milking-tubes. Could that have been the cause of her sickness?"

ANSWER:—The use of the milking tubes, or what is the same, want of thorough milking, caused the garget you complain of, ruined your cow and might have caused her death. If a restoration to health is yet possible, it will have to be done by frequent, persistent and thorough milking.

Swelled Legs.—H. V., Marine City, Mich., writes: "I would like to know what to do for my mare. She is five years old. She tore her legs on a wire fence some time ago, and when she stands a short time in the stable her legs swell."

ANSWER:—Give the swelled legs of your mare, every morning, a thorough rubbing, either with the hand, a woolen rag, or with a wisp of straw. Then exercise the animal during the day; after the exercise apply to the swelled legs a good rubbing again. This done, put on bandages to be left on till next morning. Repeat this every day until you find that no more swelling takes place; or until the existing swelling cannot be reduced any more.

Wants a Treatise on Lump-jaw.—A. B., Bucklin, Kan., writes: "Please give me through your columns a treatise on lump-jaw. My cow has a lump about the size of a goose egg between the forks of the jaw. It is very hard but may be moved about by pressing on it."

ANSWER:—You ask too much. To republish a lengthy treatise requires a good deal of space. Suppose everyone of the 260,000 subscribers of the FARM AND FIRESIDE should make a similar request. The treatise you refer to was first published as a bulletin by the Ohio Agricultural Experiment Station. You will find directions for treatment of such cases to which treatment can be applied, in FARM AND FIRESIDE of November 1, 1891.

Hide-bound.—P. N. B., Bossier Parish, Knox Point, La., writes: "I have a mare which has had two colts in the past two years. By having one each year, I suppose she has lost flesh. She is hide-bound and does not eat heartily. What will bring her appetite to her?"

ANSWER:—What you complain of is not a distinct disease, but is the result of insufficient nutrition, caused either by some chronic or cachectic disease, or by starvation. The first thing to be done by way of treatment is to remove the cause or causes. Having a colt every year will not produce the condition you complain of, provided the mare is otherwise healthy, receives sufficient quantities of wholesome and nutritious food, and is in every respect well cared for.

A Horny Scar.—J. B., Swanton, Ohio, writes: "Please tell me how to remove a small protuberance on my horse's front leg. The bunch is about the size of a half dollar and was caused by tearing up the skin on a projecting nail in the stall about five months ago. The sore healed, but left a callous spot just above the pastern-joint, on the outside of the leg."

ANSWER:—Such a horny scar cannot be removed except by excision, and then, unless the borders of the new wound are properly united, and a healing affected by first intention (without suppuration), the second scar may be as bad, or even worse than the first one. Such an operation, and the subsequent treatment, therefore, should be entrusted to nobody but a competent veterinarian.

Enzootic Ophthalmia in Sheep.—M. M., Bowen, Ill., writes: "I have a flock of one hundred ewes that have a disease that acts like pink-eye on horses. They have very sore eyes, and some could not eat for a few days. Some of the lambs have sore eyes; others can hardly swallow for a day or two. I have the ewes in three good barns. They run outdoors in the daytime. My sheep are in good order. I have good, bright clover hay, but have fed only a little grain. I have been raising sheep for six years and this is the first thing of the kind I have ever seen."

ANSWER:—The best advice I can give you is to have your sheep examined by a competent veterinarian; or what would be still better, to write to the veterinarian of the Illinois Agricultural Experiment Station, Champaign, Ill., and ask him to come and make an investigation.

A Bad Sore.—F. A. K., Norwood, Mo., writes: "Will you please tell me what will cure my colt's foot? Her right front pastern-joint swelled up very large about four weeks ago. I poulticed it with flaxseed until there appeared a soft, puffy place at the center of the joint, which on being lanced discharged matter freely. The swelling is nearly all gone, and the hair all around the joint also. The lanced place is a little larger than a five-cent piece, and there is a sponge-like growth that looks like proud flesh. I have been dressing it with an antiseptic salve, put up by one of our local physicians, and burnt alum, but it seems to have no effect on it, as it is still growing. This growth bleeds freely on being pressed or rubbed. The colt is not lame."

ANSWER:—Dress the sore twice a day with iodoform and absorbent cotton and bandage. In dressing and bandaging, follow directions repeatedly given in these columns.

Brain Trouble.—A. W., Osawatie, Kan., writes: "I have a cow, ten or twelve years old, which for six weeks has acted as if she had the blind staggers. She looks wild out of her eyes, and when she starts she staggers, turns around and falls. She soon gets up and falls again."

ANSWER:—What you complain of is caused by an abnormal pressure upon the brain, but what produces the pressure, whether it is an accumulation of serum in the ventricles, an exostosis on the inner surface of one of the bones which form the skull, the presence of a cystumor (Cenurus cerebri) in the brain, or something else, is impossible to decide from a distance, without an examination and without knowing all the attendant circumstances that may have any bearing upon the case.

Paraplegia.—M. A., Arlington, Oregon, writes: "I have a horse nine years old this spring. He has not been able to work for about three years. I think he has kidney disease. When he walks he has kind of a straddling gait, dragging his hind feet and his hind parts as if he was broken down behind. When he lies down he can sometimes hardly get up. He does not pass water as freely as he ought to. It is ropy, and he is very tender on the back above the kidneys. Some think it is a strain brought on by running up and down the hills."

ANSWER:—Your horse suffers from (chronic) paraplegia, or incomplete paralysis in the hind quarters. The seat of the trouble is in the posterior portion of the spinal cord. It is incurable, especially if of three years' standing. The horse is worthless.

Desires Treatment.—C. C. L., Old Fort, N. C., writes: "I have two horses similarly affected. The older one keeps in good order. The other rubs himself and the hair comes off of his neck and other places in patches between one and two inches broad. Both are hearty and both have scratches. They have been fed on corn and fodder almost exclusively this winter, and stood in dry stable, manure twelve inches deep under foot."

ANSWER:—The best mode of treatment consists in thorough greasing, at least once a day, in thoroughly cleaning out the stable and keeping it clean, and in giving healthy food and sufficient exercise. If these are sores or so-called scratches, a mixture of liquid subacetate of lead, one part, and olive-oil, three parts, may be applied three times a day. If chickens have access to the stable, the same must be kept out.

Cattle Dying.—S. S. E., Horr, Montana, writes: "My cattle have been dying off this winter with what some people call black-leg. They first get stiff in the legs, and the feet become sore. In about two or three weeks the hoof comes off. They eat and drink till they die."

ANSWER:—Your cattle, probably, are affected with the same disease which several years ago prevailed in Kansas, and which, according to Dr. D. E. Salmon, was caused by ergot poisoning, but which, it seems, was due to the alternate effects of mud and frost, and to nothing else. You know best how and under what conditions your cattle have been

wintered. In comparatively mild cases the animals may be saved if taken to a dry and clean stable, where the sores on the feet can receive a good antiseptic dressing—for instance, with iodoform and absorbent cotton—and be banded. Dressing and bandage have to be renewed twice a day.

Serious Enough.—S. B., Mankato, Kan., writes: "My four-year-old horse took the distemper in October last. It broke and ran under his jaw. It left him with a cough and a running at the right nostril. It smells badly, and if I drive him he breathes very hard. Pus comes from his nostril quite freely, and it is a little streaked with blood."

ANSWER:—The case you describe is serious enough, because somewhere in the respiratory passages an active morbid process, probably ulceration, is going on, and it may be that the place where it is (your description does not indicate it) is inaccessible to treatment. If it is in the frontal or maxillary sinus, it might be made accessible by trepanation, an operation which requires a veterinarian to perform it. If none is available, I do not see how you can be helped, because if no local treatment can be applied, a general treatment will be of no avail.

Reopening of Old Sore.—J. H. L., White Hall, Ill., writes: "My mare was hurt last August by barb wire in the back part of the left fore foot. I used the iodoform, as directed, until it was healed. We have used her, and she was as well as ever. The other morning I found her sore she could scarcely go. On examination I found the old wound torn open and worse than it ever had been. I think she must have stepped on it with the other foot, as the hoof had grown up higher on that side. She is very lame, which she was not at the first. Now, what shall I do for it? It is on the inside of the fore foot, just above the hoof, and the hoof is torn loose at that place. The wound runs across the foot just above the hoof."

ANSWER:—Remove all loose horn; see to it that the exudates, etc., can be discharged from every part of the sore; dress it with antiseptic (iodoform will do first-rate) and absorbent cotton twice a day, and keep the foot properly banded until healed.

A Horn.—M. E. K., Stamping Ground, Ky., writes: "My yearling colt when foaled had on the inside of the left fore leg a horn about one half an inch long, resembling in shape the spur of a rooster. It has grown to be fully two inches long, and seems to be the same substance as the outside of the hoof, only it is rough. It is situated just above the ankle-joint. I do not think it is connected with the bone, but seems to start just under the skin. The hair grows close around it. It does not lame the colt, nor does it give it any pain if it is handled. What do you think is the cause, and what treatment would you give it?"

ANSWER:—Such a formation as you describe is occasionally, but not often met with. The best way to remove it will be by a surgical operation. It is not very likely connected with the bone. If the colt is otherwise a good one, and you should have no reliable veterinarian near you, you will do best to take the colt to Lexington, and have it operated on by Dr. Beunett, Professor in the A. and M. college of Kentucky.

Has had Rheumatism.—W. B. M., Hammond, N. Y., writes: "I have a three-year-old mare that has had the rheumatism for a year past, in both front ankles. They are badly swollen on sides and the swelling is quite hard."

ANSWER:—Without at all questioning your truthfulness and your intelligence, I very much doubt the correctness of your diagnosis. A bad swelling, especially if "quite hard" on a joint, would indicate a local affection—an affection of the bones constituting the joint. In case you mean by "ankle" the joint just above the hoof—between the first and second phalanges—such a swelling as you describe is often produced by ringbone, and if you apply the term "ankle" to the joint above—between the metacarpus or shank-bone and the first phalanx—usually called the pastern-joint, such a swelling, very likely, is caused by an injury; by bruising, perhaps, to the ligaments and the periosteum, or, maybe, by a diseased condition of the sesamoid bones. The joint in a horse that corresponds to the ankle in the human foot, is the hock-joint in the hind leg, while the knee-joint of the fore leg corresponds to the human wrist.

About Fox-tail.—F. J., Sargent, Cal., writes: "Lumps come on the jaws of one of my cows, sometimes attaining the size of a man's two fists in a week. If let alone they get soft and break, discharging a thick, yellow pus. I found in one nearly a handful of fox-tail which had gotten under the animal's tongue and was working through. After the lumps break they appear to heal up. How can I tell a lump caused by fox-tail and the big-jaw? And will the remedy given by you for big-jaw be all right to use?"

ANSWER:—According to your description the fox-tail (seeds) must have worked in through the openings of the salivary ducts; the steunonian of the parotid gland, with openings near the third molar; the whartonian of the sub-maxillary gland, with its opening at the side of the frenulum of the tongue, and rivinian ducts of the sub-lingual glands, with numerous openings at the sides of the tongue. If abscesses are formed in the salivary ducts or glands, they must be opened and treated like every other abscess, and then no more fox-tail should be fed. Such abscesses have nothing to do with actinomycosis, or lump-jaw; consequently, the treatment of the latter does not apply to them.

Trouble with Cream.—Mrs. L. R., Marietta, Ohio, writes: "Please tell me what is the matter with my cream. I have a full-blooded Jersey cow five years old, that will be fresh in May. I have not been able to churn butter from her cream since January 1. I have tried over and over again, and tried every method I ever heard of, but could get no butter. I had a neighbor try some of the cream with hers and it spoiled it all. It would froth and foam and show no sign of butter. It made no difference how long I would churn. Her milk will not clabber since the trouble with cream. She is perfectly healthy, eats well, has plenty of exercise, all the fodder and hay she wants, and meal twice a day. We tried a change of feed all around, but nothing made any change in her milk. I know there is no fault in the milk utensils as I have dealt with milk all my life. She was fresh last spring but came into our possession later."

ANSWER:—The difficulty is not with your cow, and although I do not doubt at all that your milking utensils, etc., are scrupulously clean, the same, or the premises, in some way have become infected with a germ (a bacterium), which gets into the milk and causes the trouble. What it is that has become infected, that, of course, I cannot tell—possibly, it may be the water that is used. I would advise to disinfect whatever may have become infected, and to use other water, and if possible, to keep the milk and cream in a different place until churned.

Our Miscellany.

A SAILOR BRAVE.

WHAT ONE MAN'S PERSEVERANCE AND ONE WOMAN'S FAITH DID FOR THE ADVANCEMENT OF SCIENCE AND THE WEAL OF MANKIND. THE HERO OF 1492.

[No. 3.]

BY J. W. J.

On the 25th, land was announced by Martin Pinzon, and the crews joined heartily in singing the *Gloria in Excelsis*. But they were doomed to disappointment, as it proved to be a bank of clouds. After several similar mistakes, the men became greatly alarmed and were ready to burst forth into mutiny. Columbus soothed some with soft words and seductive flatteries, others he shamed into pretended bravery; some were frightened into submission, and a few were stung into temporary allegiance by taunts and reproaches and appeals to their honor.

Thus, beset on the one hand with the real and fancied perils of a protracted journey into an unknown sea, and on the other by the superstitious dreads and fears of a timorous and vacillating crew, it began to look as though Columbus would be compelled to abandon the undertaking and turn his course toward Spain. The crews were ready to revolt, and the tumult and confusion became so great that on the 7th of October, it is said, Columbus and the Pinzons were constrained to enter into an agreement with the men, that in case land were not discovered within three days, they should return home. A conspiracy was also on foot to seize Columbus during the night, throw him overboard, and account for his disappearance by saying that he had fallen into the sea while studying the stars.

Two days later land was discovered, and on going ashore, Columbus took possession in the name of the crown of Castile, calling the island San Salvador. Thus the Bahamas first received the discoverer of the New World.

Success at once changed Columbus into a hero. Instead of a reckless, demented fanatic, bent on his own destruction, and regardless of the safety of others, he became a miracle of wisdom, possessed of every virtue, and the quaking cowards and malcontents of a few hours before crowded around him, eager to do him honor.

Astonishment filled the minds of the simple islanders, who regarded their visitors as gods come down from heaven; a belief long entertained by the natives, and only dispelled after they had bled one of the newcomers under the waters of a river, and then watched him for three days to see if he would revive.

Continuing his voyage further, Columbus landed successively at the islands of Conception, Exuma, and Cuba. He next discovered Hayti, which he named Hispaniola. On this island he built a fort, and leaving there about one third of his men, he sailed for Spain on the 4th of January, 1493, taking with him several of the natives, a quantity of gold, fruits, and a number of birds and other articles from the New World.

During the return voyage, a violent storm arose, and Columbus, fearful that his vessel would be destroyed and the knowledge of his discovery perish, hastily prepared a written statement of his achievements, and, heading it up in a cask, consigned it to the waves.

Before reaching Spain, a storm forced him to run into the harbor of Tagos, where he was received in a flattering manner by King John, the Portuguese monarch, who had treated him so treacherously on a former occasion.

He reached Palos on March 15, 1493. The court was then in session at Barcelona, and as soon as Ferdinand and Isabella were apprised of the great navigator's safe return from his long and dangerous voyage, crowned with success and eager to relate his adventures, their enthusiasm and impatience knew no bounds. He was instantly instructed to repair to Barcelona.

What a sensation must have been produced in the streets of Palos when Columbus set out for Barcelona, accompanied by the strange looking natives of the mysterious western country, arrayed in their barbaric costumes, and wearing rude collars and bracelets of gold. The gaudy plumage of the birds from the new world added brilliancy to the pageant, and the effect was enhanced by the rare flowers the men bore with them. The queer looking quadrupeds that made up a part of his collection, unknown in Europe, came in for their share of the wonder and admiration of the people.

The entire trip to Barcelona was one continued ovation. Columbus was the hero of the hour. Crowds thronged the highway and impeded the progress of the procession. Bells were rung, cannons fired, bonfires built, and the people shouted themselves hoarse in doing honor to the man who, a few months before, had been regarded by them as a flighty, visionary enthusiast, and who, immediately after his departure, had been unanimously consigned to a watery grave, along with the whole body of his deluded followers.

On his arrival at Barcelona, court etiquette was entirely relaxed, and Columbus was ordered to be seated in the presence of the sovereigns, and relate his adventures. This was the moment of his greatest triumph. Eight months before, a needy adventurer, with difficulty obtaining an audience with Ferdinand and Isabella, he now enjoyed their confidence and esteem, was admired and respected by them, and was recognized throughout the realm as the most learned navigator and talented scientist of the day.

Ferdinand was exceedingly gracious, and Isabella was all smiles and congratulations. No wonder she felt proud of the intrepid mariner, whose splendid talents and unexampled courage had opened the way to the discovery of a new world. And who will doubt that she felt proud of her own part in the program, and that she looked upon Columbus as her especial protegee and hero; for without her assistance and the timely co-operation of Ferdinand, even the wisdom and energy of Columbus would have availed but little against the prejudice and ignorance that prevailed.

What a proud moment it must have been for Columbus when he entered the presence of the Spanish sovereigns, and seating himself (a privilege allowed only to visiting kings and queens and personages for whom the court

desired to express the highest degree of respect), beheld the brilliant assemblage of courtiers and nobles, scientists and philosophers, each waiting with breathless interest for him to begin his narrative.

This scene calls to mind the one at Santa Fe in January, 1492, when the contract was entered into between Columbus and the Spanish sovereigns. This scene has been made the subject of a magnificent and colossal oil-painting by the celebrated French artist, Brozik. Nothing could present a more favorable opportunity for the display of an artist's talent in the grouping of figures. No written description can convey even a faint conception of the wonderful effect produced on heart and mind upon beholding this picture for the first time. The impression is at once bewildering and startling. The figures are so life-like, so natural in their attitudes, and the faces so full of expression that you are for the moment deceived and embarrassed, thinking you have blundered into a studio in the museum, and that the figures before you are real men and women, dressed for the occasion and posing as models.

There are twenty-seven faces in the picture, and the most obscure and insignificant is a study in itself. The artist seems to have devoted to each figure as much care and attention as though it were the only one on the canvas and his reputation depending on its perfect execution.

To convey a correct impression as to the different articles of wearing apparel used by the lords and ladies of the Spanish court in Columbus's day, every color of the spectrum had to be employed; yet there is no violation of good taste. On the contrary, perfect harmony is noticeable in all the blendings and shadings. The effect is enchanting.

The working up of details is marvelous. Each hair on Columbus's head seems to have been painted with a view to showing its exact color and texture. The material in Ferdinand's robe appears to have been executed fibre by fibre, and one is, in fact, tempted to test its softness by a pressure of the hand. And the jewels on Isabella's delicate fingers seem to reflect the sunlight that steals in through the stained-glass window and fairly blaze again. Her piquant, lively, beautiful Spanish face holds the eye and steals the heart of every beholder.

But, of course, the point at which interest centers and seems never to want to wander from again, is the noble figure of Columbus. He stands in the foreground beside a table, on which Juan de Colona, the Spanish secretary of state, is engaged in writing the agreement. One hand is raised and points, almost with the finger of prophecy, toward the sea. That his eloquent appeal has made a profound impression on his auditors is evidenced by their wrapt attention and the expression of eager wonder and admiration to be seen on every face. Isabella seems overcome by her emotion, and ready to spring to her feet and personally join the bold navigator in his expedition.

This grand production of M. Brozik is on exhibition in the Metropolitan Art Museum, in Central Park, New York City. It was presented to the museum in 1886, by Mr. Maurice K. Jessup, a wealthy and philanthropic resident of New York.

It occupies a space twenty-five feet long, is proportionately high, and cost a fortune. Countless thousands of people have stood before this picture and drunk in the beauty of the scene depicted on its silent canvas. All day long, day after day, and week after week, a procession of eager faces may be seen passing before it; and each beholder carries away with him a new impression of the splendor of the Spanish court; a better conception of Columbus and the great work accomplished by him four hundred years ago, and a deeper and more abiding interest in the events connected with the discovery of America than could be produced by reading several volumes on the subject.

While admiring this handsome and costly work of art, we could not but feel a deep sense of regret that so many people all over the United States would be debarred by distance from seeing and enjoying it; and when we thought of the pleasure it would afford our readers if they could, one and all, visit the Metropolitan Art Museum and gaze upon this chef-d'œuvre of the painter's art, we began to regret that our purse was not long enough to enable us to get up a grand, free excursion to New York and take our whole family of readers on board. But we reflected that they would make a body of people almost equal in number to the inhabitants of the metropolis, and that the hotels and restaurants, and even the boarding-houses and private families could not afford accommodations for them, and that they would probably raise their voices against us and cry, like the Israelites of old, "Were there not graves enough in the United States, and the Dominion of Canada, and in Mexico and the South American republics, that you have brought us here to die?"

However, even a question of such difficulty as this could not long remain unsolved in an age of possibilities like the nineteenth century, and the question has been solved. With the aid of the lithographer's art, this wonderful picture has been faithfully reproduced in oil, with colors equal to those of the original, the execution being even finer, and every one of our readers can have a copy of it in his own home, where it will be a source of pleasure and a joy forever. For full information concerning it, we refer our readers to another column. No American home will be complete without a copy of this picture. The respect that is due Columbus, and the gratitude we owe to Ferdinand and Isabella, will inspire every patriotic American with a desire to possess a copy of it. It will be the admiration of the children of the household, and stimulate them to search encyclopædias and histories for information concerning the events of 1492. They cannot be too well informed on the subject in this, the four hundredth anniversary year since the noble and heroic Columbus opened to the gaze of an astonished world the glorious Western Hemisphere, where has been founded the Grandest Republic on the face of the earth.



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—AND—

GENERAL DEBILITY.

GRANT, NEB., Jan. 11, '92.

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Gentlemen:

For five years I had been a great sufferer from nervous prostration and general debility, receiving only temporary relief by the use of medicines. Seeing your advertisement in the Omaha Bee, I sent for your catalogue, which led me to purchase of you a ladies' belt.

I received the belt last March, and had no trouble whatever in understanding the directions for regulating and using it, and have given it a fair trial and can say I have great faith in electricity as a curative agent.

When I first received the belt I put it on every afternoon and wore it from 4 to 6 hours for three weeks. At the end of that time my health had so improved that I did not deem it necessary to wear it every day, but put it on every other day, or every two or three days as I saw fit. My health did not improve so rapidly as it would have done had I not overtaxed my strength with hard work. But every time I used the belt I experienced beneficial results. When very tired I would put the belt on, and it always seemed to rest me, and it certainly did improve my appetite.

I have used my belt for sick headache, by holding disks to the forehead and neck or face, and always experienced great relief. At present I am in better health than at any other time during the past six years, which is greatly due to the use of one of Dr. Owen's Electric Belts. I do not use the belt now only occasionally, but do not wish to be without one as long as I live. I can honestly say that Dr. Owen's Electric Belt is no humbug, and wherever it has failed to give satisfaction it was because it was not rightly understood or properly applied.

Hoping others may be benefited as I have, I sincerely remain,

Your friend,
MRS. D. E. BRIDGES, Grant, Perkins Co., Neb.

Smiles.

NATURAL BORN.

Rather inclined to be pretty,
Rather inclined to be good;
Rather inclined to a vague, undefined
Feeling of sweet sisterhood
Toward the young fellows who love her;
When they have asked for her hand.
Rather inclined to a vague, undefined
Feeling they don't understand.
Fact is, this maiden can't help it;
Natural born coquette.
Rather inclined not to make up her mind
To marry, that is, not just yet.
Sister she'll be to them all, and
Loving, and faithful, and true;
Rather inclined round her finger to wind
About—say a dozen or two.

PUTTING THE BEST FACE UPON IT.

POMMERY was met by an old friend whom he had not seen for several years.

"Bless me, Pommery, old boy! I'm glad to see you. You are looking well. How is it with you?"

"Fair to middling," replied Pommery.

"Married yet?"

"Yes."

"That's good."

"Not so very good. I married a shrew."

"Ah—that's bad."

"Not so very bad. She brought me thirty thousand dollars."

"Indeed—that was good."

"Not so very good. I laid it out in sheep in a Texas ranch, and they all died of foot-rot."

"Surely, that was most unfortunate."

"Not so very unfortunate, for I sold the skins for more than the sheep cost me."

"That made ample amendment."

"Not so very ample. I laid out the money upon a house, and the house burned down, with all that was in it."

"That was hard luck, surely."

"Not so very hard. My wife was in it!"

A CASE OF FAVORITISM.

"I can't see," said the woman who was having her flat papered, "why the landlord should give me a brown-and-yellow paper like that when the folks on the next floor got a beautiful blue paper on their wall."

"I can tell you, marm," said the paper-hanger. "I warn't going to let on, but it's a clear case of favoritism."

"Of course it is," snapped the woman, "enny one with half an eye can see that; but why should he favor that slab-sided, cross-eyed—"

"Tain't her—it's his favorin'," said the paper-hanger, dropping his voice to a mysterious whisper. "Her paper's blue, ain't it? Well, do you know why he gave her the blue color and you the brown? You must swear you won't say a word—there's Paris green enough in that blue paper to kill a hull family."

"Lor! you don't say so!"

"Yessum, it's a fact. Now, this yere paper's made of mineral color, and won't hurt a fly, and the perfidious man hung another roll upside-down, while the woman hurried out to tell the neighbors.—*Detroit Free Press.*

A THRIFTY MAN.

"Here, young man," said Russell Sage one day, as he held out a nickel to a fakir who had dropped his box of tin watches on the stone coping of the Trinity church-yard fence and dodged, at the risk of life and limb, after the old man's hat, which had blown half way across the street. The fakir knew the multimillionaire, says the *New York Recorder*, but had evidently not reckoned on the thrift which helped win the millions. "Thank ye, Mister Sage," he said, as the size of the reward dawned upon him. "Wait a minnit an' I'll give you yer change." Deacon Sage hurried away and the bystanders laughed.

HER CRITERION OF PURITY.

"Did you hear my little girl's last smart remark?" was a question overheard on a Pittsburgh cable-car the other day.

"No; what was it?" replied the lady addressed.

"You know she says her prayers every night."

"Yes."

"She doesn't stick to the prescribed formula, 'Now I lay me,' etc., but offers up some original petitions. The other night she said: 'Dear Lord, bless papa and mamma, and all my aunts and uncles, and make me pure. Make me awful pure. Make me as pure as the—baking-powder. Amen.'—*Pittsburg Chronicle.*

A MEAN WOMAN.

First floor-walker—"Talk about meanness. That woman in the black silk is a reg'lar old miser, I'll bet."

Second floor-walker—"Did she haggle over prices?"

First floor-walker—"No; she selected her things and paid for 'em fast enough, but during the whole seventeen minutes we've kept her waiting for her change, she hasn't moved around once to look at the other sorts of goods we've got on sale. 'Fraid she'll see something she wants, I s'pose."

SHE CRACKED THE ICE.

"Do you think any girl ever proposes in leap-year, as they say, Jennie?" he asked.

"Not unless she is obliged to," answered the maiden.

"H'm, I hadn't thought of that," he said, after a pause.

"But George," she said, laying her hand affectionately upon his arm and looking into his eyes, "you, I am sure, will never force me to that humiliation."

"No—er—that is to say—of course not—I—"

The ice was broken, and three minutes later George was Jennie's accepted.—*New York Press.*

HOME FROM FLORIDA.

Eveline—"Mabel, dear, the gentleman we just passed was Mr. Trotter, whom we met at Fernandua."

Mabel—"So it was. Oh, Evy, let us drive from this place before he recognizes me."

Eveline—"But I thought you liked him."

Mabel—"And so I do. But this is the same suit I wore the last time we met, and—and—what would he think of me if he saw it again."

HIS CONTRIBUTION.

Priest—"Pat, there's a hole in the roof of the church, and I am trying to collect enough money to repair it. Come now, what will you contribute?"

Pat—"Me services, sor!"

Priest—"What do you mean, Pat? You're no carpenter."

Pat—"No; but if it rains next Soonday, Oi'll sit over the hole."—*Rochester Jury.*

SATISFACTORILY EXPLAINED.

Squire Oskosh (to operator in western office) +—"Look here, this 'ere telegram from my son Rube don't sound like him. It's too kind of sharp and pointed like. Haven't you made some mistake?"

Operator—"Oh, that's all right. You see, our wires are down west of here, and we have been working about sixty miles over a barbed-wire fence."

CROPS AND PRICES.

Housekeeper—"Why are apples so high in price?"

Marketman—"Cause they're scarce, mum."

"But the papers said the crop was so enormous that apples were rotting on the trees all over the country."

"Yes'm. That's why they're scarce. It didn't pay to pick 'em."—*New York Weekly.*

BEAUTY IS A CURSE.

Little Nell—"Mamma says th' preacher says beauty is a curse. What does that mean?"

Little brother—"That means if mens and womens was all ugly there'd never be any more fightin' and quarrelin'."

Little Nell—"Why wouldn't there?"

Little brother—"Cause nobody'd ever marry anybody."—*Good News.*

NO USE FOR IT.

"What's dis?" asked Uncle Rastus.

"That is a patent safety razor. Take it along, Rastus; I'll give it to you."

"Gwaw! way from here. I don't need no safety razor. Wen I goes to a ball I wants a razzar dat's loaded, en doan you forgit it."—*Nutmegs.*

SMALL PROSPECTS IN LIFE.

"What did Miss Shortsleeve say when you asked her for her hand?"

"She asked me how I made a living."

"And you said—"

"With my brains."

"And what did she say?"

"I hadn't capital enough."

TWO VIEWS.

Miss Smith—"What a pretty home you have now, Mrs. Johnson. Quite Queen Anne, is it not?"

Mrs. Johnson—"Yes; Queen Anne in front, and Mary Ann at the back."

OF COURSE IT WAS.

Tom—"Did you ever hear Smith tell about that trout he caught last summer?"

Jack—"No; but it must have been a big one."

Tom—"A big fish?"

Jack—"No; a big lie."—*Yankee Blade.*

POSITIVE PROOF.

"Papa," said a talkative little girl, "am I made of dust?"

"No, my child. If you were, you would dry up once in awhile."—*San Francisco Wasp.*

FULL VALUE.

Mrs. Lovey—"How much money do you waste on your cigars, Charlie?"

Mr. Lovey—"Waste money! My dear girl, you can't waste money on the kind I smoke."

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During the next 30 days these pieces will be given as a free present to any one paying 50 cents for one year's subscription to this paper. If you are already a subscriber you can have your subscription advanced one year by accepting this offer.

Given as a premium to any one sending 1 new yearly subscriber to this paper, and the new subscriber is also entitled to a choice of one of the free presents. See "Who is a New Subscriber?" below.

We offer them for sale for 20 cents. Postage paid by us in each case.

Prem. No. 428* contains 8 pieces, 6x6 inches, all different colors, the same quality of plush as offered above. The large size of these pieces makes them especially valuable, but we give them as a premium for only 2 yearly subscribers.

Price, including 1 year's subscription, 65 cents. We offer them for sale for 40 cents. Postage paid by us in each case.

OUR 1892 STAMPING OUTFIT.

Premium No. 421. A stamping outfit complete. Contains 40 correctly drawn designs, with two complete alphabets, both capital and small letters, box of stamping powder, pad and sheet of instructions. We name here only a few of the designs, to show the great variety of subjects they cover: Spray of Wild Roses, Bunch of Plums, Cup and Saucer, Owl on Branch, Butterfly, Decorated Fan, Bird Flying, Horse-shoe, Spider-web, Braid Designs, Edgings, etc., etc. The paper used is a good, strong bond paper, equal in every respect to many high-priced outfits.

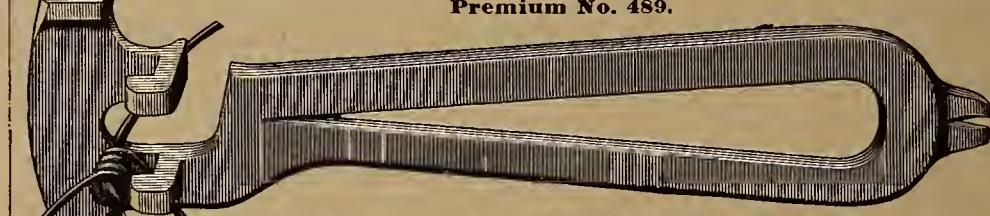
During the next 30 days this outfit will be given as a free present to any one paying 50 cents for one year's subscription to this paper. If you are already a subscriber you can have your subscription advanced one year by accepting this offer.

Given as a premium for 1 new yearly subscriber, and the new subscriber is also entitled to a choice of one of the free presents. See "Who is a New Subscriber?" below.

We offer it for sale for 30 cents. Postage paid by us in each case.



WIRE-SPLICER AND STAPLE-PULLER.



Premium No. 489. No Man who has Wire Fences can afford to be without it. With the Wire-splicer two pieces of wire can be spliced as neatly and strongly as it is done at the factory, one wire being wrapped tightly around the other, as shown in the cut. This is the only tool of the kind on the market. In combination with the Wire-splicer is a Staple-puller. Everyone knows how hard it is to get the staples out of a fence post. With this little tool and a hammer they can be taken out as fast as the puller can be placed in position. The same tool also has a claw for drawing light nails or tacks, a hammer head for driving tacks, and the handle is in shape to use for a light wrench; the hook is very useful for handling barbed wire and protecting the hands from injury. Thus, there is combined in this one tool half a dozen that would cost separately one or two dollars. Directions for use go with each tool.

During the next 30 days this Wire-splicer will be given as a free present to any one paying 50 cents for one year's subscription to this paper. If you are already a subscriber you can have your subscription advanced one year by accepting this offer.

Given as a premium for 1 new yearly subscriber, and the new subscriber is also entitled to a choice of one of the free presents. See "Who is a New Subscriber?" below.

We offer it for sale for 25 cents. Postage paid by us in each case.

The Widder Doodles' Courtship.



This cut, illustrating one of the sketches, "The Surprise Party," shows the laughable side of a surprise on both sides.

By "JOSIAH ALLEN'S WIFE."

Premium No. 726.

No other writer hits off the every-day occurrences of life in the keen, witty and laughable style of "Josiah Allen's Wife."

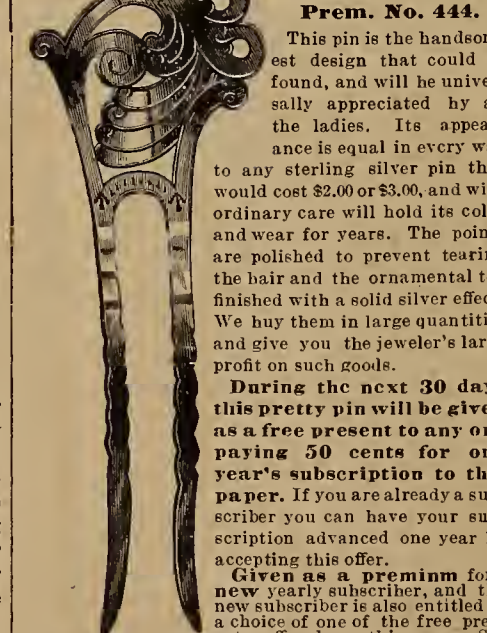
The book is a collection of fifteen sketches. There is many a hearty laugh in store for the reader. Get it and "laugh and grow fat."

During the next 30 days this book will be given as a free present to any one paying 50 cents for one year's subscription to this paper. If you are already a subscriber you can have your subscription advanced one year by accepting this offer.

Given as a premium for 1 new yearly subscriber, and the new subscriber is also entitled to a choice of one of the free presents offered on this page. See "Who is a New Subscriber?" below.

We offer it for sale for 25 cents. Postage paid by us in each case.

Ornamental Silver-Plated HAIR-PIN.



Prem. No. 444. This pin is the handsomest design that could be found, and will be universally appreciated by all the ladies. Its appearance is equal in every way to any sterling silver pin that would cost \$2.00 or \$3.00, and with ordinary care will hold its color and wear for years. The points are polished to prevent tearing the hair and the ornamental top finished with a solid silver effect. We buy them in large quantities and give you the jeweler's large profit on such goods.

During the next 30 days this pretty pin will be given as a free present to any one paying 50 cents for one year's subscription to this paper. If you are already a subscriber you can have your subscription advanced one year by accepting this offer.

Given as a premium for 1 new yearly subscriber, and the new subscriber is also entitled to a choice of one of the free presents offered on this page. See "Who is a New Subscriber?" below. Postage paid by us in each case.

We do not offer it for sale.

FELT TIDIES



Premium No. 426. Two is company. Three is a crowd.

All stamped ready to be worked. These elegant tidies are made of the finest quality of embroidery felt, 14 by 18 inches in size, and come in various colors. During the next 30 days this Tidy will be given as a free present to any one paying 50 cents for one year's subscription to this paper. If you are already a subscriber you can have your subscription advanced one year by accepting this offer.

Given as a premium for 1 new yearly subscriber, and the new subscriber is also entitled to a choice of one of the free presents offered on this page. See "Who is a New Subscriber?" below.

Price, including one year's subscription, 65 cents. We offer it for sale for 25 cents. Postage paid by us in each case.

FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio.

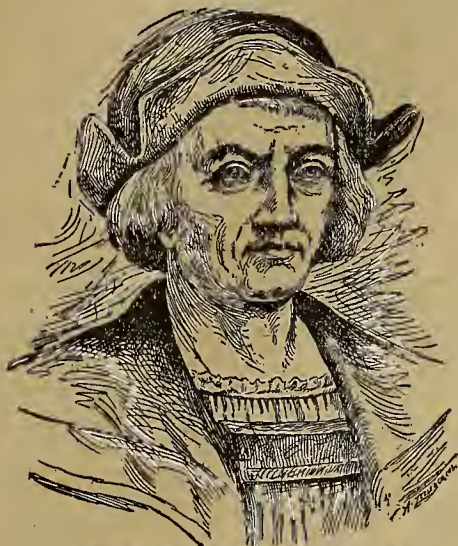
1492

A Remarkable and Fitting Tribute to
America's Four Hundredth Anniversary.

1892

A MAGNIFICENT OLEOGRAPH, REPRESENTING

COLUMBUS AT THE ROYAL COURT OF SPAIN.



CHRISTOPHER COLUMBUS.

The supreme moment in the life of Christopher Columbus as he stands before King Ferdinand and Queen Isabella, in the Royal Court of Spain, has been made the subject of a

Wonderfully Beautiful and Expressive Painting

By the famous Artist, M. BROZIK.

It occupies a space 25 feet long and proportionately high, in the Metropolitan Art Museum, in New York City, having been presented to that institution by Mr. Maurice K. Jessup, a wealthy resident of New York.

A LARGE FORTUNE

would not represent its present value, and its artistic merit makes it one of the greatest attractions in this gallery, which is the largest and most celebrated in our land.

DESCRIPTION OF THE
PICTURE.

It is impossible to convey in words an adequate impression of the grandeur and beauty of the picture. The royal court of Spain, with King Ferdinand and Queen Isabella robed in the gorgeous apparel suitable to their high station, and surrounded by the Lords and Ladies attendant upon the court, all attired in the picturesque dress of that day, listening with rapt attention and breathless interest to the impassioned appeal by Columbus, for their influence and aid to enable him to accomplish the one controlling passion of his life.

Columbus, of course, is the principal figure of the painting. In your own mind try to imagine what this moment was to him, after long and fruitless efforts to obtain the necessary aid, to finally find himself in the favor of Kings and Queens, with the desire of his life just within reach. There is reason for the almost oppressive earnestness and confidence he had in the result, that shows in his countenance, and could not be in the least overshadowed by the expressions of wonder and doubt plainly shown in the faces of some of his listeners. After Columbus, the two leading figures are King Ferdinand, who appears as if he hoped but doubted; and the beautiful and queenly Isabella, whose face reflects her faith in the final success of the expedition. These different emotions have been clearly produced in the picture. Such a subject for a painter is rarely found, but when found and treated by such a master of his art as M. Brozik, the result is necessarily world famous. The picture contains 27 figures, every one a study in itself. The execution of every detail is marvelous, even to the lace on the ladies' sleeves, the arabesques on the noble's sword; and the exquisite colors and texture of the costumes are reproduced with startling effectiveness.

The Columbian Exposition,
OR WORLD'S FAIR,

celebrating our anniversary of the discovery of America, will awaken great interest in this painting, and has led us to engage the most talented and skilful artists in the world to reproduce this masterpiece of art in its minutest detail, brilliant coloring and wonderful beauty. These artists have promised to give us the pictures May 1st. A correct and perfect oleographic copy, in the 14 original colors, will be secured, regardless of the cost. If only a few hundred pictures were made

THEIR ACTUAL COST WOULD BE \$10.00 OR \$15.00 EACH,

but we have contracted for enough to supply the Many Tens of Thousands of our readers whom we believe will accept this opportunity of securing a valuable work of art (which this picture will certainly be), at a price made possible only by our large orders. The great number of oleographs produced will not detract from their artistic merit, as each and every picture will be perfected in the highest style of the art. The size of our reproduction will be 20 by 29½ inches. To introduce this picture to our readers and extend the circulation of our publications, we will give a copy or reproduction of this

FAMOUS * PAINTING * FREE

In all the original colors, to any one sending us three yearly subscribers to this paper, at the regular price, 50 cents a year. Or, to any one sending three subscribers who accept any of our premium offers in connection with a year's subscription to this paper.

Price, including one year's subscription to this paper, only \$1.

Postage paid by us in each case.

Orders for the pictures may be sent now, and will be promptly filled upon completion of the work by the artists. First come, first served.

Order this picture by Premium No. 101
and address all orders to

FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio.

THE ARTIST.

Vacslav Brozik, the artist to whose magic pencil we are indebted for the faithful representation of the first act in American history, is not an old man. He was born at Pilsen, Bohemia, in 1852, and born an artist. In his early childhood pictures had a fascination for him. As soon as he could handle a pencil he began to draw. His evident talent induced his friends and relatives to make him an artist. He studied at the Academy of Art, in Prague, under the foremost living artists, Piloty and Munkacsy. His pictures soon began to attract attention, and brought him great fame and honor. His name was heard in all art circles, and lovers of art made long journeys to study his pictures. Brozik is not unknown in America. Many of his small pictures grace the private collections of American art-lovers. The popularizing of this master-piece, by reproduction in the highest style of lithographic art, is destined to make his name a household word in American homes.

QUEEN ISABELLA.

Few Americans fully appreciate the credit due this good and beautiful queen for the part she took in the discovery of the American continent. Intelligent and informed beyond the masses of the people of her time, she saw the feasibility of the proposed expedition, and at least partially comprehended the great results likely to accrue therefrom. To Columbus belongs the honor of discovery, yet without means to provide for the expenses of the expedition, he would have been powerless, and could not have led the expedition. While those who had wealth would not risk it thus, the graceful queen mortgaged her precious jewels, and thus provided money to fit out the expedition.

GRAND PRIZES FOR LARGEST CLUBS.

Given in addition to the Free Presents to Subscribers and Valuable Premiums or Big Cash Commissions to Agents.

FIRST GRAND PRIZES.

The choice of the following prizes will be awarded each week to the person sending the largest club of subscribers for this paper:

Singer Sewing Machine, equal to other \$55.00 machines.

Gents' Gold Watch, genuine American jeweled movement, gold filled hunting-case, warranted for 15 years.

Ladies' Gold Watch, the same make, movement and case as the gents' and of equal value.

Grand Prizes will be awarded each week during April, and you should embrace the opportunity of securing one or more. Remember, you will be given YOUR CHOICE of the list.

The names of the winners of prizes for the weeks ending April 2, 9 and 16 will be given in our issue of May 1. An earnest effort and a little good work may put your name there. The winner of the Special Grand Prize for the largest club sent us in March, a \$50.00 Incubator, will be announced in our issue of April 15.

SECOND GRAND PRIZES.

The choice of the following prizes will be awarded each week to the person sending the second largest club of subscribers for this paper:

Set of Rogers Tableware, 6 knives, 6 forks, 6 tablespoons, 6 teaspoons, 1 sugar shell, 1 butter knife.

Decorated China Dinner and Tea Set, containing 78 pieces, handsomely decorated.

Webster's International Dictionary, latest revised edition with patent index, full sheep binding.

Remember, you will be given YOUR CHOICE of the list.

The names of the winners of prizes for the weeks ending April 2, 9 and 16 will be given in our issue of May 1. An earnest effort and a little good work may put your name there. The winner of the Special Grand Prize for the largest club sent us in March, a \$50.00 Incubator, will be announced in our issue of April 15.

Names of Prize Winners.

For the Week Ending March 5, 1892.

S. H. Weaver, Stillwater, Ohio, was awarded his choice of First Grand Prizes offered, for sending 35 subscribers, the largest club received during the week.

Mrs. W. W. Derby, Friend, Neb., was awarded her choice of the Second Grand Prizes offered, for sending the second largest club, 17 subscribers.

For the Week Ending March 12, 1892.

Mrs. Ernest Robinson, Curve, Tenn., was awarded her choice of the First Grand Prizes offered, for sending 30 subscribers, the largest club received during the week.

Mrs. S. S. Hudspeth, Mayfield, Ky., was awarded her choice of the Second Grand Prizes offered, for sending the second largest club, 20 subscribers.

Any one may get up Clubs for this Paper and compete for the Grand Prizes.

Even if you do not secure one of the Grand Prizes, you are sure of valuable premiums for your trouble, as the Grand Prizes are given in addition to the premiums offered to those who get up clubs. See other side of this sheet.

Address all letters to FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio.

3,000 JOB LOT BICYCLES
20 to 50% off.
And lowest prices on all '92 makes & 2d. hand. Easy payments. We sell everywhere.
'91 Cash 'n' Carry, 30 in. balls, \$35; 40 in. \$37; Victor Jr., balls \$17
'90 Crescent ('91 make) \$50; '91 \$135 Rambler \$99
'91 \$145 Cash 'n' High Grade \$90; And 20 other styles as cheap.
Largest stock and oldest dealers in U. S. Agts. wanted.
Cata. free. **Rouse, Hazard & Co., 32 E. St., Peoria, Ill.**

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Write **CRYSTAL CREAMERY CO., 40 Concord St., Lansing, Mich.** for Catalogues of **CREAMERIES, Etc.**
Glass Milk Cans, Never Rust, Water Tanks of steel plate, everlasting. Cream without ice or with ice. We want agents everywhere. Big cut in prices.

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The BEST, CHEAPEST and MOST DURABLE.
We also manufacture Grain Thrashers and Separators, Reap Powers, 2 and 3-horse Tread Powers, Hand and Power Corn Shellers, Chilled Plows, Hand and Power Feed Cutters, Grinding Mills, 1-horse Cultivators, Empire Mowers, Hay Rakes, Wood Saws, &c. **S. S. MESSINGER & SON, TATAM, PA.**
Price and catalogue free.

Truth Crushed to Earth Will Rise Again,
but sometimes s-o-l-o-w-l-y that one tires of waiting. If she would "get a move" on her like our Coiled Spring Fence after being struck by a drove of Texas steers, she could demand of falsehood an unconditional surrender.
PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

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This is Our Guaranteed **\$55.00** BUGGY.
We sell direct to YOU and save you big Dealer's profit. Our \$55.00 Buggies, \$66.50 Phaetons, \$97.50 Surreys, \$11.50 Road Carts, \$5.95 Harnesses and \$53.50 Farm Wagons are used everywhere. Livemen in all parts of the United States use our goods. EVERY JOB FULLY GUARANTEED.
Refer to Commercial Agencies or any Bank here. Write for catalogue and mention this paper.
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MANUFACTURED BY **WILLIAMS BROTHERS, ITHACA, N. Y.,**
Successors to the Empire Well Anger Co.,
Mounted and on Sills, for deep or shallow wells, with steam or horse power.
Send for Catalogue.
ADDRESS **Williams Brothers ITHACA, N. Y.**

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Milkmen, Creamermen and Dairy-men can keep Milk and Cream fresh a week without using ice. Healthful, tasteless, odorless and inexpensive. SAMPLE, enough to make test, mailed for ten cents.
The Preservative Mfg. Co., 10 Cedar St., New York.

45 sold in '88
2,288 sold in '89
6,268 sold in '90
20,049 sold in '91
60,000 will be sold in '92
A Steel Windmill and Steel Tower every 3 minutes. These figures tell the story of the ever-growing, ever-going, everlasting Steel Aermotor. Where one goes others follow, and we "take the country." Though sold, we were unable to make all of the 20,049 Aermotors in '91. Orders often waited 8 weeks to be filled, but now we have vastly increased our plant and are prepared promptly to plant our increase in every habitable portion of the globe.
Are you curious to know how the Aermotor Co. in the 4th year of its existence, came to make many times as many windmills as all other makers combined? How we came to originate the Steel Tower, the Steel Fixed Tower, the Steel Tilting Tower?
1st. We commenced in a field in which there had been no improvement for 25 years, and in which there seemed no talent or ambition, and none has yet been shown except in feeble imitation of our inventions.
2d. Before commencing the manufacture, exhaustive scientific investigation and experiments were made by a skilled mechanical engineer, in which over 5,000 dynamometric tests were made on 61 different forms of wheels, propelled by artificial and therefore uniform wind, which settled definitely many questions relating to the proper speed of wheel, the best form, angle, curvature and amount of sail surface, the resistance of air to rotation, obstructions in the wheel, such as heavy wooden arms, obstructions before the wheel, as in the vanesless mill, and many other more abstruse, though not less important questions. These investigations proved that the power of the best wind wheels could be doubled, and the AERMOTOR daily demonstrates it has been done.
3d. To the liberal policy of the Aermotor Co., that guarantees its goods satisfactory or pays freight both ways, and to the enormous output of factory which enables it to furnish the best article less than the poorest is sold for. For '92 we furnish the most perfect bearings ever put in a windmill, and have made an exhaustive revision of the Aermotor and Towers.
If you want a strong, stiff, Steel Fixed Tower—or if you want the tower you don't have to climb (the Steel Tilting Tower) and the Wheel that runs when all others stand still that costs you less than wood and lasts ten times as long (The Steel Aermotor) or if you want a Geared Aermotor to churn, grind, cut feed, pump water, turn grindstone and saw wood, that does the work of 4 horses at the cost of one (\$100), write for copiously illustrated printed matter, showing every conceivable phase of windmill construction and work, to the **AERMOTOR CO., 12th and Rockwell Sts., Chicago, or 12 Main St., San Francisco.**
Mention this paper when you write.

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A Wonderful Improvement. Teeth Quickly Adjusted by only loosening one nut.
THE BEST
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Ask your dealer for it. We also manufacture CIRCULAR SAW MILLS, HAY RAKES, CULTIVATORS, CORN PLANTERS, SHELLERS, &c.
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This cut shows our \$5.50 Harness which we make a specialty of and DEFY COMPETITION.
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Mention this paper when you write.

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At the annual meeting of the Vermont Dairymen's Association, Jan. 12th to 14th, 1892. Is not this a grand victory, there being over seventy competitors; the three judges stating that it was the finest lot of winter butter they ever saw. This makes the **23d GOLD MEDAL** awarded. No system can compare with the Cooley Creamer. Send for Full Illustrated Circulars.
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See Large Advertisement in Last or Next Issue of this Paper.
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SIX ROWS of Potatoes or Two Rows of Trees can be sprayed with THE CLIMAX SPRAYER
The Best machine for the purpose ever built.
TWO ROWS can be neatly marked at a time with the IMPROVED RIGGS FURROWER
any width or depth, leaving a mellow seed bed. I also manufacture Riggs Plows, Cultivators, Ladders, Harrows, Corn Shellers, Wagon Jacks, etc. Illustrated Catalogue FREE. **THOMAS PEPPLER, Box 68, Hightstown, N. J.**

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A comb that combines the strength of metal with the elasticity of a brush. Efficient, humane, convenient and durable. Descriptive circulars on application. Send 5c for sample by mail. If not sold by your dealer. **SPRING CURRY COMB CO., South Bend, Ind.**
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EASTERN EDITION.

VOL. XV. NO. 14.

PHILADELPHIA, PA., and SPRINGFIELD, OHIO, APRIL 15, 1892.

TERMS 50 CENTS A YEAR
24 NUMBERS.

The Circulation of FARM AND FIRESIDE
this issue is

300,800 COPIES.

The Average Circulation for the 24 issues of
the last 12 months has been

273,125 COPIES EACH ISSUE.

To accommodate advertisers, two editions
are printed. The Eastern edition being
100,800 copies, the Western edition
being 200,500 copies this issue.

Farm and Fireside has More Actual
Subscribers than any Agricultural
Journal in the World.

Current Comment.

THE Russian Famine Relief Committee of the United States has sent out an urgent appeal to the farmers of America:

To-day it is the wretched lot of some twenty great provinces of middle and southern Russia, having a population equal to nearly one fourth that of the whole empire, to suffer the horrors of famine.

For successive years their crops were scant, and last year they failed so almost entirely that multitudes are without food other than the refuse of their neighbors' fields, granaries, cellars and kitchens, the seed of weeds and the bark of trees ground and mixed with all these. The cattle on which they had depended for milk or service, and even their horses, needed as beasts of burden, are slain and consumed as a means of prolonging life until relief shall come from some quarter of the globe.

Starvation alone is terrible enough, but the famine in Russia has been aggravated by a fierceness of cold rarely known in a Russian winter, while fuel is so scarce that in many cases remnants of stubble and the thatching of stables, mixed with turf and dried scrapings of the barn-yard, afford the only means of warming their hovels and cooking the miserable pittance of food thus gathered together.

Nor is this all. Pestilence, too, has come with all its added terrors. Hungering, freezing and beset by famine fever, the poor peasants of Russia demand the world's sympathy as it has seldom been demanded in all human history.

Europe in general has been a sufferer from the drouths of 1891 and has little to spare. America has been blessed as never before. We have millions to sell, and can also give millions and feel ourselves none the poorer.

The farmers, the gardeners, the fruit-growers, the dairymen, the stock-raisers of the United States, are among the most intelligent and responsive of all our sixty-five millions. They can each give a portion, either in kind or for conversion into other produce or money, of all that they have so bountifully received.

The farmers of Iowa, Minnesota, Nebraska, Kansas, Illinois, Ohio and some other states have moved and are moving. Wheat and rye flour, kiln-dried corn-meal, cured meats, and canned goods generally are on the way to the seaboard. But many cargoes will be needed ere the wants of twenty millions are met through all the months until a new harvest.

"Therefore, whatsoever ye would that men should do to you, do ye even so unto them." There is no higher, truer, other law. Its fulfillment by Americans will banish the Russian famine and leave it but a horrid dream.

The railway companies have consented to carry car-loads of famine supplies to the seaboard without charge; the owners of mills and kiln-drying houses at Akron, Ohio, and at Wilmington, Del., are preparing corn at almost no cost to the donor, and when your gifts are ready, if you have no other preferred medium, application to the Red Cross, 732 Fourteenth street, Washington, will secure printed tags, in required number, that will direct them to places of consignment on the sea-board.

Unless relieved by liberal aid from the United States the dread Russian famine must prevail until after the coming Russian harvests. All Europe suffered last season from short crops. So the starving must be fed from the bountiful crops of America.

It should be known that the Russian government, although its revenues have been seriously crippled by widespread and repeated crop failures, is nobly exerting itself to rescue the starving people. It is a mistake to suppose that the Russian people are not helping their suffering fellow-countrymen.

CLEW'S *Weekly Financial Review* warns investors against monopoly stocks. And it declares that public opinion is becoming more and more decidedly hostile to whatever form of organization conspires to defeat free competition. Congress and the state legislatures find it necessary to respect this determined attitude of the people, and at no distant time the laws will be so framed that nowhere in this country will any form of corporation which aims to exercise the powers of a monopoly be able to exist under the ægis of the law. The attempts of the trusts to evade the penalties of their illegality by organizing under the loosest form of legalization to be found under state laws will become futile. The procurement of control of a system of competing railroads, under such expedients as have been adopted by the Philadelphia and Reading, will be declared illegal, because contrary to public policy. The law will be constructed with a simple purpose of preventing the defeat of competition by monopolies; and that form of prohibition will be made to apply to any and every form of organization. Of this there can be no reasonable doubt; for the present drift towards monopoly is so widespread, so utterly revolutionary in every sense in its character, and so threatening to vast interests that to suppose that it can be much further tolerated would be to assume that American citizens had lost their regard for freedom and their sense of self-respect.

THE house committee on agriculture has reported favorably on the Paddock pure food bill, which passed the senate without a division.

The question arises if the bill becomes a law, as it should, will it accomplish the purpose for which it is intended? Some states now have excellent laws against the sale of fraudulent and adulterated foods which are not very well enforced. Will the federal law be enforced better than the state law? In our opinion it will be. That is the experience with federal and state laws on other subjects. Take liquor laws for an illustration. The United States government requires liquor sellers to take out a special license. The agents are vigilant and the revenues are

collected. The federal law is so well enforced that the revenues are collected from thousands of liquor sellers in states that have laws prohibiting the sale of liquors.

South Dakota, for example, is a prohibition state, but it is said that over sixteen hundred government licenses to sell liquor have been taken out there. The liquor dealers are bold enough to defy the state law, but they hardly dare defy the federal law. There is no question that the federal liquor laws are better enforced than the state liquor laws.

The Paddock bill against the sale of fraudulent and adulterated foods and drugs, if it becomes a law, will apply only to articles taken from one state or territory and exposed for sale in another. It can apply only to commerce between states.

In order to destroy a business that is a crime against humanity it must be supplemented by the enforcement of state laws on the same subject. Working harmoniously together, the federal and state laws can stamp out the crime in every state in the Union.

THE agitation of the road question the past few months, during which time the roads generally have been in an unusually wretched condition, has brought forward a number of plans for road improvement. The object of some of these is to provide for the permanent improvement of public roads without adding much to the burden of taxpayers. A bill embodying this feature has lately been introduced into the New York legislature.

The bill provides that all male prisoners over eighteen years of age and physically able shall be enrolled by the prison warden as subjects to draft for manual labor on the public roads of the state, and a list thereof shall be filed with the superintendent of the state prison.

The state engineer is to decide what roads shall be improved, and the general work shall be entirely under his supervision. Prisoners shall be furnished, on the requisition of the state engineer and his corps, with proper guards and keepers.

Removable board shanties shall be placed every eight miles on the road to be improved, each one to cost not exceeding \$250, and to accommodate twenty convicts, who shall work the road four miles each side of their shanty. The roads are to be macadamized. Not more than three fourths of the eligible prisoners shall be working on the state roads at any one time. The tools necessary to carry on the work shall be manufactured in the state prison.

Cooking utensils, blankets, etc., shall be supplied by the prison from which convicts are drafted. Food for convicts shall be secured by contract in the vicinity where they are working. When an eight-mile section is completed, the convicts working that section shall be removed to another section. Eight hours shall constitute a day's work, and every convict who faithfully performs his duty shall have ten per cent of his sentence commuted, over and above all commutations now made by law.

Convicts have often been employed to advantage on public works, and while there may be objections to the system, it has its merits.

Not the least of the merits of this bill is that it provides for the employment of convict labor in a line that competes very little with free labor.

THE Alliance representatives in Congress have agreed upon and will introduce a loan bill. The bill provides that the United States treasurer shall, on demand of a state, issue to it non-interest-bearing treasury notes, in amount not exceeding \$30 per capita of its population. The state demanding a government loan shall deliver to the United States treasurer its lawful bonds to the full amount of the treasury notes demanded. The bonds are to be taxable at one per cent per annum, and the tax is to be paid into the United States treasury yearly. The bonds are to fall due at the end of twenty years, but the state may redeem part or all of them any time before they fall due. The state legislature is to provide for loaning these government notes to the people on such terms as it may deem best for their welfare.

The bill provides for the issue of a currency, based on state bonds, to the possible amount of \$1,878,667,500, an inflation that ought to satisfy the wildest financial fanatic.

The bill leaves a wide latitude for state legislation regarding the placing of loans among borrowers. Who are to pay the one per cent tax on the state bonds given as security for the treasury notes? Are all the taxpayers of the state to be assessed for that purpose? Or will the borrowers alone have to pay it? If the latter, as in justice they should, then they cannot borrow money under this loan bill for two per cent. It will cost more than two or three per cent to have the securities offered by borrowers examined, mortgages executed, the loans safely placed, etc. Money cannot be safely loaned in comparatively small sums under this scheme at a two-per-cent rate of interest, unless non-borrowing taxpayers are made to bear part of the expense of placing and collecting loans. The bill leaves room for a large amount of unwise state legislation.

THE lower branch of the Ohio assembly has passed a bill providing that railroad companies whose lines are more than twenty-five miles long must sell one-thousand-mile tickets at a rate not to exceed two cents a mile, and shall make the tickets transferable. Provision is also made that the holder of the ticket may take with him not more than four other persons whose fares shall be taken from the book.

The bill is a long step in the right direction, but it should have gone all the way to a straight, two-cent-a-mile rate to everybody. It would also have been better if it had contained a provision abolishing the free pass system.

With the abolition of free passes and the increase of passenger traffic that will surely follow a lowering of the rate, the net profits of the railroad companies will not be reduced.

Free passes should be abolished as a matter of simple justice to the passengers who pay their fare, for they must pay enough extra to reimburse the railroad companies for the cost of carrying the deadheads.

FARM AND FIRESIDE Directory, on page 6, will tell many inquirers where they can get full information about farm implements, machinery and vehicles. Descriptive catalogues and price lists will be sent free by the manufacturers.

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vertised in several papers.

Our Farm.

SEED BUYING AND SEED TESTING.

BY T. GREINER.

OCCASIONALLY we read something
in the papers about seed control
stations. These are old country
institutions, and intended to
be a safeguard for the seed
buyer against impositions
practiced by the seed seller.

Of course, all they can be expected to do
is to test the vitality of the seeds
offered by the trade. They can examine
a certain package of seed, and find out
what percentage of the seeds will germi-
nate under favorable conditions. They
cannot tell us, however, whether the
variety or the strain is one worth growing
or not. In short, they can relieve the
grower of an easy task that he can just
as well perform himself (testing seeds
upon germination), but they can do noth-
ing whatever to protect the seed buyer
against losses by planting seeds of inferior
strains or varieties.

For instance, I may buy Jersey Wake-
field cabbage seed, and get ninety-nine
good plants from every one hundred
seeds; but only forty or fifty of these may
produce good heads. Or I may procure
another sample that will produce seventy-
five or eighty good plants from each one
hundred seeds; but every plant will
make a good head. The seed control
station would recommend the one, and I,
or any other grower, would prefer the
other. I would much rather use Danver's
Yellow onion seed, that gives me sixty or
seventy plants from every one hundred
seeds, every plant making a sound bulb,
than seed of another strain showing 100
per cent germination test, that will give
me 50 per cent scallions.

The guarantee given us by seed control
stations is worth but little, if anything.
We have a much better protection against
losses by fraud and carelessness of seeds-
men than control stations can give us in
the lively competition among seedsmen,
which compels them to give us good seeds
at the risk of their reputation and trade.
This competition, in fact, has become so
powerful an agent that good seeds are
now the rule, and poor ones the exception;
provided, however, the seed buyer uses
some reasonable care in the selection of
the party of whom he buys his seeds. If
he goes to the grocery and buys the seed-
packets taken out of the commission
boxes, he does not use reasonable care or
discretion. If you want a watch, go to a
responsible jewelry store, not to the
grocery. If you want good bread, go to
the baker's; if you want good seeds, go to
the seedsman.

I am quite sure we have no need of seed
control stations in this country, and
believe that the cry for these institutions
comes mostly from persons who wish to

create more fat offices, in the hope of being
placed in one of them. The seed trade
may safely be left to be regulated
by the laws of competition; and its de-
velopment will then be far healthier and
more natural than if encumbered with
red tape of any kind. Reliable seedsmen
nowadays are just as anxious to send out
none but good seeds as seed users are to
purchase them. For this reason it is now
a common practice among seed dealers to
test all seeds before sending them to their
customers. Thus the seedsmen them-
selves perform all the services that we
could expect of seed control stations.

On the whole, I believe that home gar-
deners might rest satisfied with the pro-
tection that seedsmen's competition
affords him. He usually plants a number
of varieties—small quantities of each, say a
packet of a kind. Should one happen to
fail, wholly or partially, little is lost. The
other packets of the same kind of veg-
etable will give him what plants he wants.
I have annually planted hundreds of
packets of seed, procured from almost
every seed house in the United States,
and among all these I have met but very
few cases that a packet failed to give me
all the plants I wanted. To test all these
different kinds of seeds would be a big
and tedious job. I see no necessity for it,
and never make a practice of testing such
seeds.

It is entirely different with the market
gardener, who plants his seeds by the
pound or half pound. He cannot afford
to encumber his business with even the

throughout its entire length by capillary
action. A pane of glass covers the box,
which is kept at a temperature of from 70°
to 80° Fahrenheit. A box of this size will
hold fifty pockets. Fifty or one hundred
seeds should be tested of each variety,
running duplicates if possible. It is best
to examine the seeds daily, remove, count
and record all that have sprouted. With
cabbage, tomatoes, lettuce and turnips,
over half of the seeds will usually germi-
nate in six days; but it is necessary to
continue the test for two or three weeks
in order to determine the exact per-
centage."

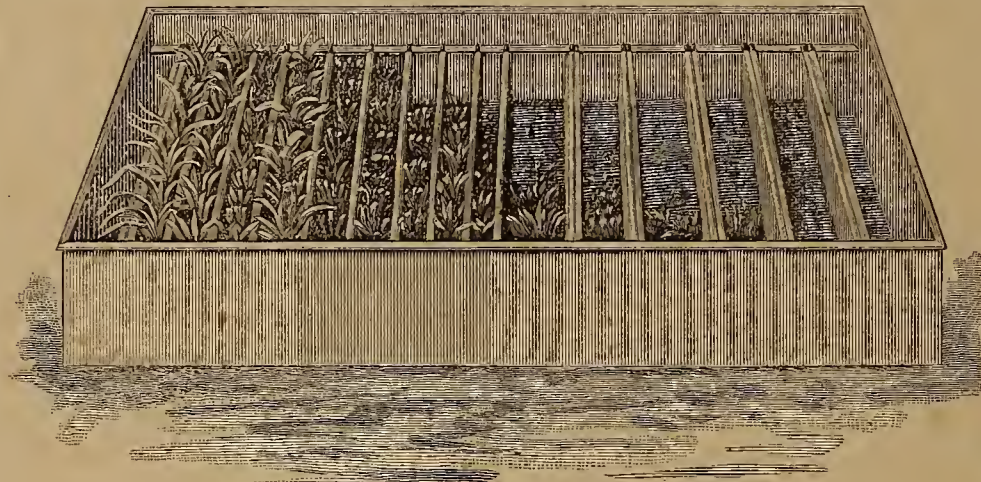
This is, indeed, a simple and inexpensive
contrivance, which every market gardener
can have and use to advantage. It will
even be no damage to the home gardener,
and may be a source of instruction and
interest to all.

THE FARMERS' SEED-TESTER.

BY W. M. K.

The accompanying engraving represents
the seed-testing apparatus which has been
in constant use in the seed division of the
United States Department of Agriculture
since September, 1885.

It consists of a heavy block-tin pan 17
inches in length by 12 inches in width
and 2 3/4 inches in depth. It is painted
inside and out. Two and one eighth
inches from the bottom is a ledge, half an
inch in width, soldered to the sides. It is
upon these that the ends of the brass rods
rest and support the V-shaped pockets in
which the seed is placed to determine its



SEED-TESTING APPARATUS.

smallest fraction of uncertainty. He
must be absolutely sure of his ground.
On the vitality of his seeds depends the
whole outcome, profit or loss, and this to
the extent of many hundreds of dollars.
He should test all the seeds of which he
intends to plant largely. Sometimes he
can buy seeds in the fall, and plant some
of them under glass—either largely enough
for a crop, or merely to test them. Some
gardeners buy cabbage or cauliflower seed
in greater quantities than needed. If they
prove what is desired, there will be enough
left for the next season's planting. Of
course, these seeds are just as good the
second season as the first, and are good for
several years, anyway.

This is not the case with onion seeds,
and they had better be tested. This is not a
difficult job for any one that has a green-
house or hotbeds. Count out a hundred
seeds, plant them in a little bunch or row,
in good soil, covering lightly. Keep
moist, and they will soon sprout. Count
how many of the hundred produce plants,
and if you get seventy-five or upwards,
you need not hesitate to plant such seed.

There is really no necessity of getting
costly and elaborate seed-testers. A flat
box or a flower-pot filled with nice, fine
soil, kept moist and in the proper tem-
perature, is about all that is required.
Still, if you wish to have a seed-tester that
is simple and reliable, get the one known
as the "Geneva" tester, because used at
the Geneva (N. Y.) station. I find a de-
scription of it in Bulletin No. 1, Vol. V, of
the Tennessee State Agricultural Exper-
iment Station, as follows:

"The apparatus consists of a copper box
fourteen inches long by nine inches wide,
and three and one half inches deep, with
a narrow copper shelf on each long side,
one half inch below the top. On these
shelves slide brass wires, which serve as
supports for as many pockets or folds of
canton flannel cloth. In the bottom of
the box is one half inch of water, but it
does not touch the pockets, all the
moisture reaching the seeds by gradual
absorption. The ends of the cloth dip
into the water, and carry moisture

vitality. The pockets reach nearly to the
bottom of the pan. They are held in po-
sition by No. 9 brass wires 11 3/4 inches in
length. They are passed through the
hemmed edges of the pockets and project
half an inch beyond the ends. To make a
pocket, take two strips of unbleached
thin muslin, each 10 1/2 by 2 1/2 inches, and
turn a hem on each piece seven sixteenths
of an inch in width, through which the
supporting wires are to be passed, and
then stitch the two pieces together 1 1/4
inches from the unhemmed edges. About
twenty pockets will be sufficient for one
pan. After slipping in the wires and
moistening the pockets, the seeds to be
tested, numbering 25, 50 or 100 of each
sort, are placed within the muslin trough
and the bottom of the pan covered to the
depth of half an inch with water slightly
warmed. The lower edges of the pockets
coming in contact with water keeps the
seed sufficiently moist by means of capil-
lary attraction. The pan is then covered
with a thick pane of glass and set close to
a window. The date that the test is be-
gun and closed is carefully noted, as well
as the per cent of the seeds that have ger-
minated. In this way the number of
seeds required to produce a good stand
can be determined.

For use on the farm for determining the
vitality of corn, grass, clover and other
seeds, any comparatively shallow pan or
an ordinary bread-pan will answer the
purpose. When using a pan of this kind
the ends of the galvanized or painted iron
wires can rest on the upper edges of the
sides. An ordinary pane of glass will
answer for the cover. The necessary ven-
tilation will then be secured and the
proper degree of heat and moisture re-
tained.

If the pan is supplied with tepid water
occasionally the plants will continue to
grow, and the pockets through which the
roots will have penetrated before the season
for planting has arrived can, after the
wires are withdrawn, be subdivided
with a pair of scissors and be transplanted
with pieces of cloth, and their growth will
thereafter be continuous, if the season and

other necessary conditions are at all favor-
able. By this method the purchase of
worthless and inferior seeds can be obvi-
ated and the proper amount of grass and
other seeds to sow to the acre may be de-
termined definitely, although one quarter
or one third the seed possesses no vitality
whatever. A simple seed-testing appar-
atus of this character would in many in-
stances save the replanting of a field of
corn, when the germ in the seed had been
destroyed by the sudden and extreme
changes from mild damp weather to that
of extremely dry and intensely cold.

The failure to obtain a good "catch" or
"stand" is almost invariably attributed to
the season or other causes than the real
one, which in many cases is that of in-
jured or worthless seed.

COTTON DEPRESSION—THE CURE.

No. 2.

The United States senate proposes an
elaborate committee investigation into the
cause of low prices of cotton. No investi-
gation is necessary. The cause may be
summed up in a single word, overpro-
duction, and no investigation, however
elaborate, can establish any other. As
pointed out last week, production has
outstripped consumption and the stocks
on hand above immediate wants continue
to pile up, while prices fall about as rapid-
ly. The surplus sets the price for the
whole crop.

Values will not rally again until there
is a prospect that the normal relations
between demand and supply are likely to
be re-established. This can be brought
about in but two ways. The first, the
immediate abandonment of a consid-
erable portion of last year's cotton area,
which will promptly restore the industry
to a satisfactory basis. The other course
is less drastic, and its effect will be less
prompt. It is simply to check further
extension, and hold the acreage where it
is until consumption overtakes produc-
tion. The first would be the heroic rem-
edy, difficult, but immediately effective;
the other the doubtful, hesitating policy,
probably efficacious in the end, but calcu-
lated to continue the present unsatisfac-
tory condition over a period of several
years. It is the difference between decis-
ive action and indecisive temporizing.

There are serious difficulties in the way
of immediate action, which in all prob-
ability cannot be entirely overcome.
There is but little union or cohesion
among planters, and it will be well nigh
impossible to secure concerted action.
Individual action cannot take the place of
general co-operation. For years southern
men have recognized that production was
approaching dangerously near the surplus
line, and year after year there has been
the same talk of reduced acreage. It has
begun and ended with talk. Every
planter has waited for his neighbor to re-
duce while he himself has put in a little
more so as to reap a good share of the
expected profit. The reduction by word
of mouth in the spring has proven an
increased crop, and decreased price in the
fall. Expectations are not fulfilled, and
next year a still larger area is planted in
order to make good previous losses. So
it has gone until bitter experience is
sternly teaching the lesson of oversupply
and consequent necessity for mutual co-
operation.

The present condition is intolerable,
and with this observation may be dis-
missed the idea of waiting where we are
until the world's demand catches up.
That but draws out the agony, and while
the patient may be cured he will be left
too weak to take advantage of his oppor-
tunity when it comes. Can the difficulties
in the way of an immediate adjustment
be surmounted?

There are many elements to be consid-
ered. The world has reached that period
when lower values will rule in every line,
and all productive industries must adjust
themselves to the new order of things.
Manufacturers strive to lessen the cost
of their wares; improved farm imple-
ments and more effective labor are con-
tinually cheapening the production and
marketing of farm crops generally. Cot-
ton growers must realize and prepare to
meet the inevitable by making cheaper
cotton—cotton which can be sold at a
profit at prices which now mean actual
loss. A cheaper product, with a supply
wisely regulated to the world's require-
ments, is the only solution. Other influ-

ences may assist, but these are the two absolutely essential requirements.

Cotton reaches its best development in our South, but it is not the only paying product for which that section is pre-eminently suited. In devotion to it, advantages in other lines of production have been overlooked. The time has hardly yet gone by when it was beneath the dignity of the southern gentleman to grow anything but cotton. If his plantation grew a little fruit, he would give it away, but sell it—never. The corn grower was not of his caste, while the trucker, market gardener, or small farmer of to-day would have been an object of scorn. Such things were small and piddling, but to-day the followers of the despised branches are gradually acquiring the best portions of the old plantation. Diversification has come slowly—too slowly—but its progress has marked the decadence of the old idea. Increased transportation facilities are hastening it, and Carolina truck, Florida fruit and Georgia melons in northern markets are the mile posts of its progress.

In devotion to cotton everything else was neglected. Kentucky and Tennessee bred the mules which plowed it; the hay and the corn to feed them was hauled from the station to the plantation; bacon, flour and farm food supplies were purchased from other states. At the same time the work of six months of the year was directed to killing grass, and hogs ran wild in the woods. Forests were girdled and trees felled and burned to make room for cotton, while the ax and the ax helve came from the North. These conditions have changed and are changing, but the transition is slow, and one of the heaviest burdens to-day upon the industry is this same dependence upon outside sources for supplies and materials. This burden must be taken off, and its raising will materially assist in the necessary cheapening of production. The South cannot only produce her own food supplies, but she can profitably produce a surplus. Leaving out tropical and semi-tropical products, in which she has no competition, her unrivaled soil and climate enable her to compete with any section of the country in the production of most of our staple crops.

In meat production there are advantages which are not utilized, perhaps not realized. Cattle need but little winter care, and with no cold weather to endure may be forced to early maturity. Pork is not necessarily corn fed. It is perhaps better otherwise. A mixed ration, which only the South can offer, of corn with pea-vines, clover and similar products, will produce a superior article at little cost. Again, all feed will be for fat and growth, while perhaps from 15 to 25 per cent of feed used in present pork districts goes as fuel to keep up animal heat. These are but hints of what may and must be done in other lines of production.

The making of home supplies will assist in cheapening production, but more yet can be done. Labor, under the direct supervision of the land owner, will be more effective than the present share and tenant system so largely followed. Fertilization can be increased and the use of high-priced commercial fertilizers discontinued. Let the needed material be manufactured on the farm. The compost pile is a mine of wealth. After securing the oil from the seed, the meal and cake may be made to bring two profits. With pea-vines, clover and grasses it will grow and fatten cattle and sheep, and they will return to the soil the constituents needed. This will be mixed farming, and mixed farming is what pays. A cash expense is here lopped off and a profit added to the planter's income, while the heritage of fertility, which belongs to the future generation, is preserved intact. With more effective labor and better fertilization is bound up the possibility of an increased yield per acre. The difference in the cost of cultivating an acre which makes a heavy yield and one which makes a medium or poor yield is but slight. It follows that every pound of cotton beyond the ordinary crop is clear profit, and the cost of production reduced to that extent. The average under the present system does not represent the capacity of the soil. Intensive farming, smaller acreage, and better application of scientific methods will give an increased

average, which will represent additional profit.

An economic feature, which must not be overlooked, can only be touched. The system, unfortunately only too general, of mortgaging the crop in advance of production and even before it is planted, for plantation and personal supplies, is the direct result of the running behind which planters have experienced in poor years and failed to make up in good seasons. Under this system the work of a season simply goes toward paying for the living of a previous year. There is no encouragement to extra effort. It is a millstone around the neck of enterprise. Supplies purchased on such credits are bought at enormous advances, excessive interest is paid, and the final payment is out of all proportion to the original purchase. The only remedy is to get out of debt, a thing easier said than done, but a thing which will become harder and harder with the recurrence of every disastrous season.

Economy, care, attention to details and a high-priced cotton, which will follow a heavy cut in production, will finally effect it.

What is needed now is a crop of 7,000,000 bales each year, grown upon 14,000,000 acres, thus releasing 6,000,000 acres of arable land for other products. This extra area, now wasted in cotton, will bring in other products which will pay, and yet no more labor will be required for the cultivation of all than is now expended on cotton alone.

A crop of this size, with the reduction equitably distributed among all growers, will bring a larger aggregate and individual cash return than will another 8,500,000 or 9,000,000 bale crop. Even such a crop with good prices will not in itself bring prosperity to southern agriculture. More than cotton is needed. The value of the whole crop of 1890 would not board the population of the cotton states at a first-class hotel for one week, and nine such crops would not give as much per capita as the people of New Hampshire, the state of abandoned farms, have on deposit in their savings banks.

The absolute domination of cotton in its agriculture has been the real reason for the lack of rural progress in the South. The one-crop idea has been taught from generation to generation. Cotton not only dominated agriculture, but social and political life as well. It was king indeed, and in its day it lorded not only over the South, but over the Union. That day is gone. Its rule in its chosen home is breaking, and the dismemberment of its empire will be followed by agricultural progress and prosperity.

B. W. SNOW.

POP-CORN AS A MARKET CROP.

In the FARM AND FIRESIDE for January 15, an article on pop-corn contains some statements that might be misleading to one not familiar with the crop. It is profitable for some men to grow, and indeed, there are farmers who make a specialty of it, who have all needed facilities for storing, curing and handling it, who know all the ins and outs of the business, and who make money from it. The writer referred to may have sold pop-corn for six cents a pound, as he stated that he had done, but it is absolutely wrong to hold out such figures as an inducement for those unacquainted with the business to engage in its cultivation as a market crop. Retail dealers frequently sell it for ten cents per pound on the cob, but no sensible man would take these figures from which to figure the profit on a crop. If grown in any quantity, it must be sold at wholesale prices, and the great bulk of the corn, sold when thoroughly cured fit to pop, will not average over half that price. Then again, the crop must be carefully cured naturally, no artificial heat being used, and it is seldom fit for market until the next summer after growing; sometimes still later. It must be kept perfectly free from rats, mice and everything that would tend to discolor or injure it in any way.

As a crop, it must be grown away from other corn, as it will mix badly, to the detriment of both varieties. The stalks are of little value for fodder compared with other corn, as they are so small. Added to the care necessary in handling the crop, the uncertainty of a market is a drawback. Of course, a small amount

can usually be peddled out in almost any town, but no dependence can be placed on this method of marketing if anything of a crop is grown. There is now, in New York, scarcely any demand for pop-corn. I know of men who have considerable quantities of the crop of 1890 on hand, besides the crop of 1891, and they cannot get an offer for it that is worth considering. To be sure, it will keep a long time if kept properly, but few farmers care to grow a crop that they are liable to have to hold for any length of time. I have no wish to needlessly discourage any one from growing this crop, but after an experience of several years in the New York markets, and after paying particular attention to this product, it is my candid opinion that a novice should go slow in engaging in its cultivation on any extended scale.

New Jersey.

F. H. VALENTINE.

SWEEPING THE FARM.

When the farmer returns to the house for meals or for a few minutes' rest he expects to find the house, every room in it and every piece of furniture, clean, brushed and swept. He may introduce visitors unexpectedly, and he wishes everything in order at all times.

He would be surprised if he found the sitting-room, day after day, in disorder and confusion, and probably his surprise would lead him to make remarks and to scold. The thrifty housekeeper is continually dusting, sweeping, cleaning, and as a result the house is the pride of every member of the family. The farmer delights to ask his friends into the house, because such neatness, order and cleanliness prevail.

Order in the house and order outside on the farm sometimes go hand-in-hand, but often they do not. If the farmer likes and demands an orderly house, why should not the farmer's wife demand an orderly-kept farm when she goes out to get the air after her work is done? Now, the farmer may take his ease and read his paper in an untidy room, but not so comfortably as in one where neatness governs, because the eye is offended and worries him.

The farmer's wife is disturbed when she walks abroad on the farm for recreation by the general litter that meets and offends her eye. Many things, from a wheel-jack to a mowing-machine, are seen where last used; wagons, parts of wagons, tools and rubbish block the way at every turn. This is not a fair return of favor. Neatness in the house should be supplemented by corresponding neatness on the farm. What a commotion there would be in some households if the sitting-room of the house was in such continual confusion as the yard of the house!

It pays to use the broom on the farm, and to use it often. Indeed, positive damage results from neglecting it. Dirt in the house breeds vermin, and rubbish on the farm may produce what is equivalent, literally or figuratively. Let the broom cut its swath from the house and barn out into every nook and corner of the farm, for the sake of appearances, if for no other reason. A well-swept farm builds the farmer's fame as a well-kept house adds to the reputation of the housekeeper!

GEORGE APPLETON.

APRIL'S SMILES AND TEARS.

Contrast adds beauty, and makes interesting objects that would be lifeless, even ugly under other circumstances. A person in tears makes a melancholy sight, but when smiles break through, when lamentation yields to rejoicing, the person is beautiful; that is, the countenance, even if very plain, is lighted up by the great contrast and made beautiful.

Thus is April now in tears and now smiling through them to the uplifting of spirits prone to droop, especially the spirits of farmers whose land is cold and backward, and who have declared a dozen times that they will not be able to plow in time to plant this season.

The great workshop of nature throws wide its doors and the work begins. Spring is delightful everywhere, but on the farm it appears to be more than it can be elsewhere, because man on a farm is in direct communication with a comrade of things that grow to beautify the land and to sustain life on it.

The sights and sounds cheer. You have seen the plump elm, the sugar-loaf maple or ash, or the favorite apple-tree bloom year after year, but you delight in it afresh in every succeeding year—in the

new dress and the new colors becoming brighter every day. The green mantle grows golden under the coaxing beams of the beneficent sun; the willows nod their heads in rhythmic acquiescence; the blue-bird trusting in old friends, builds in the same nesting place, and every living thing enters upon a new existence.

The air is soft and balmy from aromatic pines and fragrant flowering shrubs. Grateful life springs up everywhere—grateful that there is freedom from the storms of winter, from the rude jostling of the great north wind and his playfellows, now driven back to their icy caverns in the north, with the doors closed and locked behind them. The zephyrs come.

GEO. APPLETON.

HOW TO HOLD A HOG FOR RINGING, ETC.

Provide a small, stout cord, with a slip-noose in the end. Put this over the upper jaw of a hog just back of the tusks, hitch the cord to a post, and the hog will pull back and squeal, but can be held or led at ease. Strike a hog on the nose or throw him down, and he will open his mouth. A hog's nose is more sensitive than its head.

J. S. TIBBITS.

Michigan.

PLANTING POTATOES WITH A CORN-PLANTER.

I will describe my way of planting potatoes with the corn-planter. Get two tubes made of stove-pipe iron eight inches across at the top and three inches at the bottom, and long enough to set on the heel of the runner, and to come about six inches above your planter-boxes. Fasten one to each box with a bolt, and tie the lower end to the runner with a wire. Place a basket with potatoes on the dropper's seat. Let a boy sit on each box and drop the potatoes in the tubes. They will fall in behind the heel of the planter and be covered as well as corn.

Iowa.

J. B. FULLER.

Feeding the trees well to make them produce, and then spraying systematically to have sound fruit, are the essentials toward profitable orcharding. A good crop of strictly fine fruit is not often produced at a loss.



Mr. S. P. Parrott

Is a popular member of the Lynn, Mass., Fire Department, and has been driver of steamer No. 5 for five years. He warmly recommends Hood's Sarsaparilla, as it did him a great deal of good when he was badly run down and

Rapidly Losing Flesh

He says: "When I began on Hood's Sarsaparilla I improved at once, and have now regained health and strength, can eat anything and weigh 225 pounds."

Spring Medicine

Mr. A. S. Rowell, Editor of the Lancaster Gazette, Lancaster, N. H., writes as follows: "Dear Sirs: 'There is to me no cause for doubt that every one living as we Americans live during the winter, eating meat, especially fat meat, needs to cleanse the system and

Free a Clogged Liver

in the spring. The question then resolves itself into decision as to what's the best thing to take. For one, I have solved the question to my own satisfaction that

Hood's Sarsaparilla

completely fills the bill. After taking two or three bottles I always feel a hundred per cent. better, and might say without exaggeration five hundred per cent. better. The brain is clearer, the body in better condition for work,

Sleep is Sweeter

And the little troubles of life pass by unnoticed. I can heartily and honestly recommend Hood's Sarsaparilla to any one."

HOOD'S PILLS cure liver ills.

Our Farm.

NOTES FROM MY HOME GARDEN.

BY JOSEPH.

THE SOJA BEAN.—A Kansas friend asks how to plant Soy (or Soja) beans, seed of which he had received from the agricultural college of his state, and what they are good for. Some years ago I may have spoken of this vegetable, which I think is quite an interesting plant, and perhaps valuable. I have not grown it for a number of years, but shall again begin to plant it this year.

It is a kind of bush bean, of strong, upright growth, with numerous small pods which contain small, bean-like seeds. I had some that were black, and others of a kind of drab. The plant is quite moderate in its requirements, and seems to succeed well on rather poor soil. I think it can be grown for green manure, and thus be used to improve poor soils. The Japanese use the bean in the preparation of a popular national dish. We did not like the taste of the bean when cooked like ordinary field beans; but I think there are probably ways to prepare it which would render it palatable. While few domestic animals can be induced to eat ordinary beans, I found that fowls of every description will eat them quite readily. Altogether, I consider this bean (*Soja hispida*, as the botanists call it) well worthy of general trial. A number of our seedsmen catalogue the seed.

It is easily grown. Plant it as you would ordinary bush beans. Have the rows two and a half or three feet apart, and scatter the seeds thinly, covering about two inches deep. Thin plants to stand about six inches apart, and cultivate as you would any similar hoed crop. When the pods have matured, pull the plants; then stack like field beans, or store in a dry loft; thresh with the flail or with a bean-thresher.

SOME OLD POTATO SORTS.—A. Eby, of Burlington, Kan., inquires where he can obtain seed of the Mercer and Pink-eye potatoes, which were the standard varieties at the time the Early Rose was introduced; also of the Long John, or Red Cow potato, an old and very prolific red sort, long in shape and with numerous shallow eyes. I do not know whether any of our friends can advise him. I cannot.

These old sorts may be yet in cultivation here and there; but how completely they are superseded by newer varieties is shown by the fact that even the names of the former are almost entirely forgotten. The younger generation knows absolutely nothing about them. And why is it necessary to hunt these discarded sorts up again? Have we not better ones now? What is the matter with the Rural New-Yorker No. 2, White Star, with a whole lot of the newer introductions? There are indeed dozens of fine and reliable varieties, and it seems we might let those of twenty-five years ago rest in oblivion.

For an early sort I like the Puritan or Polaris (I think they are one and the same); but I do not yet feel that I can dispense with the Early Ohio. In some of the potato districts of western New York, where people believe in and practice rather heavy seeding, I have found this sort apparently as good and productive as it was twenty years ago. Last season I procured my Ohio seed tubers from that excellent western New York stock, and the potatoes grown from that seed were the finest early potatoes I had, and the finest I had grown for some years. But you want rich soil, for the Ohio is a garden potato, not a field variety, and should be treated accordingly. You can plant it close, and use considerable seed, even a whole potato.

All my Ohios last season were halved, and planted one half every foot in the row; yet, contrary to a very popular doctrine, I had no small potatoes, only three or four large tubers to the hill. The Freeman, planted in same way, came out differently. Each hill contained an excessively large number of tubers, many of which were small. I am convinced that the Freeman is one of those sorts that need rather light seeding.

EARLY TOMATOES.—I am asked about the best way to grow early tomatoes. In sections where the seasons are short

tomatoes are a treat and a rarity, valued "more than peaches," and generally bringing what I call extravagant prices (\$1 to \$2 per bushel) in the market. In my vicinity farmers would be willing to raise tomatoes for twenty-five cents per bushel.

There are few localities in the United States where tomatoes could not be grown and matured, and many people who now usually go without, in the supposition that they cannot grow tomatoes, might have them in all their lusciousness for at least two months every year. How? By taking a little pains with our new early sorts, such as Atlantic Prize, Early Ruby or Vaughan's Earliest. Start plants of these, or any one of them, early, or buy plants that were started early. Then set them in flats, pots or directly in loamy soil in a cold-frame, giving each plant plenty of space—not less than four inches each way. Get them to make good bushy plants, and in bloom by the time they can be planted in open ground, which should be done reasonably early. You can take some chances of late frosts. Should there be danger from that source, put a handful of hay over each plant; or lay the plants down and cover lightly with soil. Uncover after danger is past. Managed in this way, you can get ripe tomatoes six or more weeks earlier than you have been accustomed to. It is but little trouble, and worth all its costs. I usually have and enjoy plenty of fresh, ripe tomatoes from early in July until frost and after, or about three months every year. You can have them also.

SMOKING SEEDS, EARTH, ETC.—A correspondent from North Lansing, Mich., suggests that perhaps we might prevent much injury to our plants from insect attacks by means of smoking the seed before planting; or by smoking rich earth and putting a quantity of it around the seed.

I have little faith in the effectiveness of smoking seeds. Some of our most troublesome insects are not easily driven off by bad smells or tastes. You can't drive off or kill wireworms, for instance, by anything you might do with the seed. Soaking seed in strongest poisons, even, has had no effect on them. Still, I have thought that insects troubled my vegetables less on land where the smoky, powdery material resulting from my "roast of rubbish" was applied freely.

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

ABOUT SENDING INSECTS.

Very shortly many inquiries will probably come into this department about various insects. When making inquiries about them much delay will be avoided by giving a full history of the injuries done, including the time the attack commenced; also a small sample of the injured portion and specimens of the insects should be sent with the inquiry if possible. In sending insects do not put them into an envelope, but in a perfectly tight box, not too large. There is no need of making any holes in the boxes.

FILLING AROUND TREES.

A couple of years ago I had occasion to make a fill on ground where were planted several very precious trees. The soil where they are is stiff clay. Of course, I was apprehensive lest I should damage or destroy my pets.

To preserve them I loosened, as I should have done anyhow, the soil about the trees. Then I placed three-inch drain-pipes on end, or vertically, around each tree. Whether this precaution availed or not, I don't know, but the younger trees have thrived surprisingly since, and the older have held their own beautifully. One of the most precious, a scarlet oak, ran quite ahead of its contemporaries and took a growth I have not before seen equaled.

This experience is given that others may try, to see if there is anything in it. I shall practice it hereafter, with much confidence that I shall be reimbursed for the time and expense.

J. A. G.
College Hill, Cincinnati.

HAVE YOU CATARRH.

There is one remedy you can try without danger of humbug. Send to H. G. Colman, Chemist, Kalamazoo, Mich., for trial package of his Cure. Postage 4 cents. Test and judge for yourself. Mention this paper.

INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

Improving Wild Cranberry Beds.—M. H., Ithaca, Mich. I cannot tell you how to improve your wild cranberry bed unless I know its present condition. Is it fruitful now? Are there bare spots in it or large parts that do not fruit at all? Can it be flooded easily, and do you control all the land that would be covered with water if you flooded your part? Are any insects troublesome? These are some of the points I must know in order to answer you intelligently.

Grapes—Strawberries.—A. M., Vera, Ill., writes: "I want to set out some grapes. How should I prepare the ground before planting?—How should ground be prepared for strawberries before setting them out?"

REPLY:—Prepare as for corn, giving plenty of manure if not in good condition. Plant 8x8 feet apart each way.—Prepare as for grapes and plant two feet apart in rows three and one half feet apart.

Grafting Wax.—A. M., Irwin, Pa. A good grafting wax is made of four pounds resin, one pound beeswax and one pound tallow. If you only need a little, use one fourth the quantities. A very good grafting wax can be bought of seedsmen, and if only a little is wanted, I think it better to buy of them, if convenient. A wax such as the above should be pulled like molasses candy, with greased hands, until it is white. It will have to be softened by putting into warm water when used in cold weather. Our fruit-trees should be grafted (in April in Pennsylvania) as soon as the buds are nearly ready to open, but the scions should be cut before the buds start, and preferably in autumn.

To Prevent Trees from Dying on Account of Drought.—J. R. G., Tenn. Where moisture is lacking during the summer months the condition of the soil around trees may be greatly improved by mulching for a considerable distance on all sides with sawdust, chaff, hay or litter of most any sort. This is the natural condition of the soil around our forest trees. They have a heavy covering of rotten leaves on the soil around them which prevents evaporation from the soil. Of course, mulching can be overdone, and in wet autumns the mulch can be drawn away from the trees to advantage to allow the wood to ripen. Many trees are lost annually from drying out, caused by the blue-grass sod which has formed so close a covering that on side-hills most of the water runs off and only a very little soaks into the ground. In such cases the sod should be broken up and the trees heavily mulched and watered.

Worms in Currants and Gooseberries.—F. X. M., Oregon. I am not sure what the insect is that attacks your currants and gooseberries. It is probably very much like the gooseberry-worm of the Mississippi valley, but may be quite different. The best remedy for the destruction of the gooseberry-worm is hand-picking. Any berries found prematurely coloring should be carefully examined, and as the larvae slip out and fall to the ground very quickly, watchfulness is needed to prevent their escape. It is also recommended to let chickens run among the bushes after the fruit has been gathered so they may eat the chrysalis. Leaves and rubbish under bushes should be gathered and burned in fall or spring and a little lime or ashes scattered around the bushes.

Fruit Insects and Diseases—Spraying.—J. M. W., Pontiac, Ill., wants to know all about fruit insects, fruit diseases and spraying.

REPLY:—It is impracticable to answer such a very general question within the limits of a paper of this nature. You will find answers to parts of your inquiries in some of the recent numbers of FARM AND FIRESIDE, and I will gladly answer any special inquiry that is of general interest to our readers. The following are the names of some of the firms manufacturing spraying-machines: Wm. Stahl, of Quincy, Ills. The Nixon Nozzle Co., of Dayton, O. The Field Force Pump Co., Lockport, N. Y. The Gould Manufacturing Co., Seneca Falls, N. Y. It would be well for you to send to these parties for their descriptive pamphlets. Paris green is not dangerous to human life when used as recommended in these columns. It should be used only when very much diluted and never within several weeks of the time when the fruit is eaten. By knotty plums I take it you refer to native varieties that have been stung by the plum curculio. Recent experiments show that this insect may be kept in check upon all plum-trees by spraying them three or four times with Paris green at intervals of about two weeks after the fruit is set. The Paris green should be used at the rate of about two ounces to fifty gallons of water. If used stronger the foliage may be injured. On a small scale I have used Paris green at the rate of one small teaspoonful to a pail of water and with good results, but care must be taken to keep the poison well stirred, for if it settles a part of the water will contain enough Paris green to burn the leaves.

Northern vs. Southern Grown Trees—Seedlings True to Name—Grafting and Budding.—F. T., Scales Mound, Ill., writes: "Will fruit-trees grown south of this latitude stand this climate as well as those grown north of this latitude?—Will apricots, plums, plums and cherries produce the same fruit from the pits or seeds, and will the fruit be equal to that from grafted or budded trees?—On what kind of root is the pear grafted or budded?—Are the budded trees harder than those grafted?"

REPLY:—It is preferable to get them from northern rather than southern points, but above all things get first-class, healthy stock.—They will not, and the chances are very much against the seedlings being as good as the original trees. Practically, the only safe method is to depend on budded or grafted trees for fruit. However, there are some very few varieties of peach and plum that come nearly "true" from seed. The seed of seedlings (those not budded or grafted) is more likely to produce true to name than the seed of grafted or budded fruit.—On one-year seedlings of the wild pear which are generally imported from France and sold in this country by most of the large nursery concerns. Seedlings from the Japan sand pear are used to a small extent.—No. The hardness of a tree is dependent on the root and scion and not on whether it is budded or grafted. The hardest apple-trees are those root-grafted with long scions and long roots. And then if the roots are from seed of the Duchess of Oldenburgh or some other hardy variety they are so much the better. I object to budded

apple-trees for severe climates because the union is necessarily above ground and a part of the stock which may be quite tender is exposed to sudden and severe changes.

Insect on Strawberry Leaves.—L. E. The insect that makes your strawberry leaves curl up is the strawberry leaf-roller. The best remedy is hand-picking, or rather, hand-killing, but it must be constantly kept up so long as an insect can be found. This method requires some little experience, as the worm moves very quickly and will slide out of the folded leaf which it inhabits at the first disturbance, and will generally escape at the base end of the leaf to the ground and hide amongst the mulch or decayed leaves. If the whole leaf is quickly grasped the worm is easily crushed; all such leaves should be removed from the plant and burned to destroy any chrysalis which may not have been crushed. It is useless to attempt to unfold the leaf for the purpose of killing the worm. If all beds are to be kept over the tops should be mown off and burned when dry, as soon after picking is finished as possible. This does not hurt the beds and the leaf-roller is checked at once. Avoid getting plants from beds known to be infested. If a bed is set with plants free from this pest it will seldom or ever cause trouble the first fruiting season. Old beds are much more liable to be infested than new ones. If the second brood shows on the leaves in August the foliage should be sprayed with Paris green and water.

Currants and Gooseberries on Clay Land—Transplanting Grapes.—A. H., Holland, Mich., writes: "I have a farm that is part heavy clay, part clay loam and part good, rich sand, all with a clay subsoil. I have peaches on the sand, which is high. The clay and loam are low. What fruits are the most profitable on such soil? I have a fair market for small fruit.—Can ten-year-old grape-vines be transplanted? How should I tend my young grape-vines?"

REPLY:—Currants and gooseberries would do very well on your low, heavy land providing the water does not stand on it, but they will need to have the land frequently worked around them.—They can be transplanted, but seldom do well. I would prefer to set out a new two-year-old vine. Grape-vines are so cheap that it does not pay to move them when they are old. I cannot say how you should tend your young grape-vines, for I do not know how old they are. The first season after setting vines it is best to let them grow as they will, but keeping the ground well cultivated all the time. The second season it is customary to cut the wood all away except a stem about eight inches long, and to select in the spring one good branch coming from this, which is trained to a stake or trellis for the season. This cane should be pinched off in the summer as soon as it is six feet long, and any branches coming from it should be pinched as soon as they have formed two leaves. Such treatment produces a strong cane with well-developed buds, which will fruit quite a little the next year.

Pruning Fruit-trees and Bushes—Transplanting Roses and Apple-trees.—B. C., Lander's Landing, British Columbia, writes: "We have recently bought a farm here with a small orchard upon it, mostly apple-trees, and a few pears and plums. The orchard is young and has only been bearing two years. We understand that the former owner cut them back severely at first, and they are now fine, healthy trees, but have not been pruned for two years. Kindly state the best time for pruning and about how much these trees should be pruned. There are a number of currant bushes which have never been touched either, and gooseberry bushes also. Can you give any rule for thinning these out? There is no fear of frost here after February.—The orchard and garden have run wild these past two years, and there are a number of rose-trees I would like to move. Please state when is best to move them and how much they should be pruned; they have grown very tall and flower nearly all at the top. I was told they are choice roses, but they are stuck away out of sight against a fence. Kindly state the best time and way to move a small orchard of a hundred trees, and if there is any risk to the trees on being moved about a quarter of a mile from the present site, which is too close to the road frequented by Indians."

REPLY:—Apple-trees do not need much pruning, and only so much should be cut away as will suffice to keep the trees in good form and prevent the growth of interlocking branches. Further pruning often does more harm than good. Always think the matter over twice before giving apple-trees a severe pruning. The best time to prune apple-trees is during the latter part of winter before the sap starts, but if the work cannot be done at that time it may be done during the latter part of the summer. Currant bushes should have all wood over three years old and the wood which may be infested with the borers cut out close to the ground. About four or five strong stems should be left to each bush with two or three young stems of last season's growth. Gooseberries need about the same pruning as the currants, but besides should have one half the new growth cut away each year.—Rose-trees should be moved in the spring of the year as soon as the buds commence to swell. They should have the branches shortened back so as to leave from a few inches to a foot of the new wood, according to the strength of the growth. Probably one half of the old wood could be removed to advantage. Under ordinary conditions a rose bush, if left to itself, will produce more than twice as much growth as should be allowed to flower. Apple-trees should be moved as early in the spring as the land can be worked. There is very little risk in moving good trees, not too old. In transplanting have your land in as good condition as would be necessary for a corn crop. Dig the trees very carefully, shorten any long, straggling roots that would interfere with the work of transplanting, cut away about one half the new wood in the top, leave all wounds on the head or the roots with smooth surfaces. In setting the trees be careful and work the fine surface soil in among the roots so there will be no empty spaces. Pack the soil around the roots firmly. If the land is dry you cannot get the earth too solid; but if very wet it will not need as much pressure. Leave the land with a little hollow around each tree. When all set, the trees should be about one inch deeper than where they have been growing, if the land is similar, but if the land is much lighter than where they have been growing they may be set two or, perhaps, three inches deeper than they grew in the nursery.

Our Farm.

WORKING IN WILLOW.

A profitable pastime is open to the members of the farmer's family at all seasons of the year. It is profitable because the product is immediately useful, and it is entertaining because the work or recreation is neat, elegant and stimulates ingenuity.

Probably no utensil on the farm is in greater demand than the basket. Why should not the farmer, or members of his family, make baskets for their own use, in leisure moments when the work is easy and interesting. The baskets made at home, at least those made first, may not be so trim and shapely as those made by more experienced hands, but they will be just as strong and useful, and after a little practice, as neatly made and symmetrical.

A farmer working for his own pleasure and profit, proceeds in this way after the bark has been stripped from the willows: The handle is made first by twisting two or more strands together, according to the size and use of the basket. The handle, or length of the strands of it, determine the size of the basket. Two pieces, circular, of wood, tin, leather or rawhide, two or three inches in diameter, are prepared. One is to be the outside center of the bottom of the basket. The ends of the handle strands are brought together and nailed to it with two-pronged tacks or wire nails, and the nails clinched.

The ends of other willows forming the upright strands of the basket are nailed to the bottom piece, and over all ends in the bottom of the basket, is nailed the other circular piece. The horizontal strands are now woven between the perpendicular strands until within an inch of the twist in the handle, and the twist is supposed to begin where is to be the rim of the basket. A larger willow, halved, may be the rim of the basket, half of the willow outside and half inside, with the perpendicular strands between them, nailed through and through both ways and the nails clinched. The upright strands are then cut off even with the rim hoops. Hoops from a flour barrel, contracted, cut down and trimmed, may serve as outside and inside bands to the rim. The edge of the rim may be left as it is, or may be bound with tin, leather or rawhide to make stronger and to give a more finished appearance.

The making of baskets will lead to the manufacture of many things useful and ornamental. Beautiful fire-screens, card tables, baskets for needlework, wall-pockets and other things may be produced with the aid of a little ingenuity. In some cases these may be more ornamental if painted or colored, strand by strand, by the toy paints or water colors.

GEO. APPLETON.

EXTRACTS FROM CORRESPONDENCE.

FROM ILLINOIS.—Washington county is situated in southern Illinois. The thriving city of Nashville is the county-seat. The county is well known for its good crops of wheat, rye, hay. Fruits can be raised in abundance, such as apples, pears, peaches, plums, cherries, strawberries, raspberries, currants, gooseberries and blackberries. Ashley is a beautiful town of 2,200 people. It has good schools and fine hotels. It is one of the best shipping points in southern Illinois. Good improved farms can be had from \$25 to \$100, owing entirely to location; unimproved land from \$10 to \$15. Health is good. We have a mild climate. We have some of the finest stock in the country. Our wood is oak, maple, hickory; ash, walnut, papaw, etc. Farms can be rented on easy terms. Our greatest disadvantage is an occasional drought. We have excellent water, good schools, sociable people, and must say this is a very desirable place to live. R. A. R. Ashley, Ill.

FROM KANSAS.—Kiowa is one of the southern counties and is one of the greatest wheat-producing portions of the state. Our barley crops are immense. Some seasons we fail on oats, but rye and all kinds of fodder crops grow to perfection. Our soil is sandy and very fertile. Although a new country, we are improving very fast in buildings, fences and orchards. Peaches were very plentiful last season, and plums were to be had for the picking. Our county is settled mostly by people from Ohio and Indiana. The calamity howlers still howl here, but in a subdued tone, as they are beginning to see what a set of cranks they are. Some of them have been in the East doing all in their power to damage the fair name and fame of Kansas. The men who voted to send them to congress have sadly regretted it. Their wild-cat

schenfes and windy speeches are now the subject of ridicule by intelligent citizens, and they see that their time is up, and are beginning to wilt and wither up like a mushroom on a frosty morning. W. G. C. Haviland, Kansas.

FROM MINNESOTA.—Lake City, Minn., is situated in Wabasha county, on the shore of Lake Pepin. The scenery around the lake is grand. The town is well built and has fine residences, schools and churches. It is a very good summer resort. The town draws its main support from the excellent farming country adjoining. This land has been under cultivation thirty-five years. Large crops of wheat, barley, rye and corn are still raised. Lands in this part of the state are as good as any. I do not think this a paradise, but it would be hard to find a better farming country. Last fall I took a trip to the Pacific coast looking for some of the garden spots of the world. I found a fine country in the Willamette valley, in Oregon, but I found that many of the statements of boards of trades in those western cities were much exaggerated. Nothing is gained by misrepresentation. Salem, Oregon, is a good city. Oregon City is situated at the fall of the Willamette. The surrounding country is generally heavily timbered. Some trees are over two hundred feet high. The government lands are far away in the foot-hills and mountains. About all the good land has been taken up. It is a fine fruit country. Prunes raised here beat the world in size and flavor. The winters are mild but wet. Western Washington is covered with heavy timber. Not much farming can be done for a long time. There are some fine cities. Tacoma, Seattle and Fairhaven are good places, but times are dull. There are more men who want work than there is work to do. One with money can do well almost anywhere, but without money or a trade a man could not accomplish much. Any one well situated in the East had better look the western country over well before selling out. Lake City, Minn. L. E.

FROM COLORADO.—We had a very fine winter in this part of the state. Have not had a blizzard up to date. Stock is looking fine and there is plenty of feed. The only drawback to this part of the state is the lack of timber. Coal is from \$5 to \$7 a ton. This country is in the eastern part of the state, and consists of the eastern part of Arapahoe and Yuma counties. This is the best agricultural and stock-raising portion of eastern Colorado. This section is settled by a class of thrifty and energetic farmers. Neat farm-houses and well-prepared farms dot the landscape. The soil is a rich, sandy loam, very deep, and is particularly adapted to the growth of cereals and fruits. All the cereals, such as corn, wheat, oats, barley, etc., adapted to this latitude, have been successfully and profitably grown here every season since the first settlement, except the memorable season of 1890 when there was a general crop failure throughout the West and some parts of the East. Last season the average yields of various crops were about as follows: Corn, 35 to 45 bushels an acre; wheat, 20 to 35; oats, 40 to 50; barley, 35 to 50; potatoes, 100 to 300. This county is traversed by the B. & M. railroad; so the farmers have railroad facilities that enable them to send their products to the market that quotes the best price. This section is traversed by numerous never-failing streams, the principal ones being the Republican, Arickaree, Black Wolf, Chief and Willow creeks. It is owing to the presence of these streams and the numerous springs that line their banks and hillsides, which makes quite an area of surface water, that this section is more favored with rains during the crop-growing months than are those localities not so well watered. Land can be purchased at prices ranging from \$4 to \$8 an acre. Claim relinquishments can be had at from \$150 to \$500 a quarter section. There is quite a large amount of rough land not fit for farming, and those that wish to engage in raising stock of any kind would do well to come to this country. It cannot be beat for health. There is some government land that can be homesteaded, but it is going very fast. J. W. S. Condon, Col.

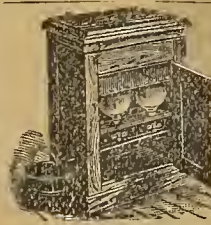
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MICHIGAN Wild Flowers The World's Columbian Exposition buys them. Send for retail, wholesale, or Carp Pond Catalogues. W. A. BROTHERTON, Rochester, Mich.

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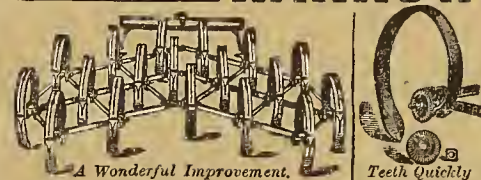
Awarded four prizes in thirteen months by Mass. Horticultural Society. Send to the originator for circulars. BENJA. M. SMITH, BEVERLY, MASS.

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\$1 Invested Makes \$5000 in six months. **FARMERS** wanted to raise Nursery Stock. Send stamp for details and directions. J. JENKINS, Nurseryman, Winona, Ohio.

STUMP BLASTING CARTRIDGES, Caps, Fuse. Mrs. prices to introduce. Catalogue free. AJAX DYNAMITE WORKS, Bay City, Mich.

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THE BEST Tooth Holder ever invented. The tooth is held in position by a Ratchet with which it can be adjusted so as to wear from 15 to 18 inches off the point of the tooth, which is four or five times as much wear or service as can be obtained from any other Spring-tooth Harrow in existence. Catalogues free. Agents Wanted. Over 10,000 of these Harrows sold in 1891. Be not deceived, buy only the **HENCH & DROMGOLD HARROW.** Ask your dealer for it. We also manufacture CIRCULAR SAW MILLS, HAY RAKES, CULTIVATORS, CORN PLANTERS, SHELLERS, &c. **HENCH & DROMGOLD, YORK, PA.** Mention this paper when you write.

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SPRAY YOUR FRUIT TREES AND VINES Wormy Fruit and Leaf Blight of Apples, Pears, Cherries, Grape and Potato Rot, Plum Curculio prevented by using **EXCELSIOR SPRAYING OUTFITS.** PERFECT FRUIT ALWAYS SELLS AT GOOD PRICES. Catalogues showing all injurious insects to Fruits mailed free. Large stock of Fruit Trees, Vines, and Berry Plants at Bottom Prices. Address **WILL STAHL, Quincy, Ills.**

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FARMS CHEAP THE FINEST, RICHEST SOIL IN THE WORLD. NO BLIZZARDS, NOR DESTROYING CYCLONES. LONG LINE OF EXPENSIVE FREIGHTS, BUT THE BEST PAYING MARKETS right at the door for farmers in Michigan. How to get a farm cheap, long time, easy payments and full information, address **O. M. BARNES, LANSING, MICHIGAN.**

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FARMERS Why pay Sixty Dollars for a Potato Planter, when you can get one from the Woodstock Potato Planter Co. for Six Dollars? We have the Best Attachments on the market, doing perfect work, planting one or two rows at a time, and from five to seven acres a day. Can be attached to any common two horse Corn Planter in from ten to fifteen minutes. Marks, Furrows, Drops and Covers all in One Operation. Hoppers hold about a bushel and a half of potatoes. Was invented and used last year, and patented Dec. 1, 1891. Shipped by freight securely packed with full directions for attaching to Planter, and using in the field, for Six Dollars. Send express or Post-office money order and give name of Corn Planter, whether slide or rotary drop. Address all orders to **J. H. Foreman, M'gr, Box 178, Woodstock, Ill.**

Always mention this paper when answering advertisements, as advertisers often have different articles advertised in several papers.

Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Peanut Culture.—C. L. M., College Springs, Iowa, desires full information on peanut culture. The May issues of FARM AND FIRESIDE will give it.

Red Clover Seed.—C. S. W., Franklinton, N. C. The yield of clover seed per acre varies greatly. We have known it to range from one peck to seven bushels. Three bushels per acre is a fair crop.

Books on Steam Engineering.—T. G. H., Utica, Kan. The best books on steam engineering that we know of are those written by Prof. R. H. Thurston, Cornell University, Ithaca, N. Y. *Cassier's Magazine* is an excellent monthly devoted to engineering. It is published by the Cassier Magazine Co., New York.

Destroying Horse-radish.—Mrs. H. S., Nashua, Ill., asks Joseph how she can get rid of horse-radish. Cut it off and dig it out the best you can; then keep watch of it, and cut it down again as often as it reappears above ground. If this is done persistently for one season, the victory is won. The roots cannot live long without having a chance to breathe through the foliage.

Poisoning the Mole.—G. G., Chalfants, Ohio, writes: "What poisons should be used for the mole, and how use them?"

REPLY BY JOSEPH:—I have never had success in poisoning moles, and would prefer traps. Some recommend soaking sweet corn in an arsenical solution and putting it in the runs; I greatly doubt that you can get the animals to eat it. Success would be more likely if small pieces of fresh, raw, lean beef, dosed with strychnine in minute quantities, are placed in the runs.

Nightsoil.—E. W. M., Millville, Mass., writes: "Which is the best mode of using nightsoil, and will it pay me to cart it one mile? Soil sandy loam."

REPLY BY JOSEPH:—Certainly it will pay to cart it one mile. If properly landed in the first place; namely, mixed with plenty of dry soil or other absorbents, it should be odorless and inoffensive. If it is not so, by all means compost it with straw manure, dry manure, loam, road dust, etc., and get it in reasonably dry and fine condition. It is then an excellent manure for general purposes.

Beans Mixing.—A. P. H., Chandlerville, Ill., asks: "Is there any danger of the bush Lima bean mixing with the early wax bean when planted at the same time and in close proximity?"

REPLY BY JOSEPH:—Next to none. The Limas are quite aristocratic, and usually refuse to mix with common beans. But even if they were more inclined to form such mesalliances, the fact that the early wax beans bloom much earlier in the season, and are pretty much out of the way when the bush Limas begin to bloom, would be an obstacle to their mixing.

Growing Field Beans.—V. C., Williamsport, Md., writes: "What are the best beans for field culture, and when should they be planted? I have rich bottom land. Or would anything else pay better on such soil?"

REPLY BY JOSEPH:—I would not plant field beans on rich bottom land. There are many crops that would do and pay better on such soil, but what they depends on your environments. If you have a good market for peas, string beans, Lima beans, sweet corn, etc., these are the crops to be planted. The bean crop is all right for soils of only medium fertility, and Burlingame Mediums is a good sort.

To Destroy Gophers.—T. O. S., Girard, Kan., writes: "How can I get rid of gophers that infest my watermelon patch? Last year they dug up the seeds before they sprouted and ate the kernels. How can I poison them?"

REPLY:—Try the following method: Pour a little bisulphide into the holes, stopping them up immediately with earth packed tight. The fumes of this volatile and poisonous liquid will soon penetrate to the remotest parts of their burrows and kill the gophers. In California, where these pests are found in immense numbers, hand pumps and bellows for forcing the fumes of bisulphide of carbon or of burning sulphur through their underground runs are used. You will find such machines advertised in the *Pacific Rural Press*, San Francisco, Cal.

Harvesting Orchard-grass.—F. P. M., Wellspring, Tenn. In answer to your question about saving the seed of orchard-grass we republish the following from a former issue: Cut and bind it as you would wheat or oats, when three fourths of the heads have turned a brownish color. Set it up in shocks of three bundles each, and tie around the top with a straw band to prevent the wind from shattering out the seed. In ten days or two weeks it will be ready for the thrasher. A machine used for wheat will thresh orchard-grass by having a riddle made for the purpose; that is, one with smaller meshes than usually sent out from the factory. Be careful when starting to close up the fan holes or the seed will be blown out and wasted. Orchard-grass is generally threshed from the shock. From six to eight hundred bushels per day can be threshed and cleaned for market.

Fertilizers for Corn.—K. R. S., Coldwater, Mich., writes: "What kind and make of fertilizers do you think the best? Will manufactured fertilizers give good results on sandy soils for corn?"

REPLY BY JOSEPH:—The best fertilizer is the one that supplies just the plant foods which soil and crop need, at lowest prices. A more definite reply can hardly be given. There are many firms who sell honestly-made fertilizers at honest prices. It would not do for me to say that such and such a firm sells the best fertilizer, or that you should buy and use such and such a brand. Every farmer must inform himself about the sources of plant foods available to him, and use his own judgment in the selection of the articles he wants to use. Often you can do best by applying the plant foods separately, as phosphoric acid in acid phosphate or bone meal, potash in potash salts (muriate, sulphate or kainite), and nitrogen in sulphate of ammonia or nitrate of soda, etc., and then make your own combinations according to needs of soil and crop. I have had excellent results with manufactured fertilizers (mostly phosphatic) for corn on sandy soils, and would not hesitate to use them again.

Farm and Fireside Directory

OF

FARM IMPLEMENTS, MACHINERY, ETC.

This Directory will be found very useful to those who want any kind of farm implements, machinery or vehicles, and our readers will find it to their interest to write to the firms named for catalogues and information before deciding what to buy.

Always mention the Directory when writing to those whose names appear in it, for Farm and Fireside subscribers will secure special attention from them.

We aim to give in this Directory the addresses of reliable manufacturers and dealers in articles that are wanted by farmers and country people. All of these firms are well known to us, and we do business with many of them. So great is our confidence in them that we guarantee to return to our subscribers any money that may be lost by trusting any one whose name appears in this Directory, who turns out to be a deliberate swindler. This offer is to actual subscribers only, and is a positive guarantee to make good any loss occasioned by swindlers.

BARB WIRE.

Kelly Barb Wire Co., Chicago, Ill.
Buck Thorn Fence Co., Trenton, N. J.

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William Deering & Co., Chicago, Ill.
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E. H. Fidler & Co., Philadelphia, Pa.

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Daniel Pratt Gin Co., Prattville, Ala.
New Orleans Machinery Co., Ltd., New Orleans, La.

CORN PLANTERS.

The Farmers' Friend Mfg. Co., Dayton, Ohio.
Keystone Mfg. Co., Sterling, Ill.

CREAMERY APPARATUS.

Davis & Rankin Bld'g and Manuf'g Co., Chicago, Ill.
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Moseley & Stoddard Mfg. Co., Rutland, Vt.

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The Long & Allstatter Co., Hamilton, Ohio.

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Stoddard Manufacturing Co., Dayton, Ohio.

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Wood, Taber & Morse, Eaton, N. Y.

EVAPORATORS.

Blymyer Iron Works Co., Cincinnati, Ohio.

FEED CUTTERS.

Stover Manufacturing Co., Freeport, Ill.
Whitman Agricultural Co., St. Louis, Mo.

GRAIN DRILLS, Etc.

Bickford & Huffman, Macedon, N. Y.

FENCE MACHINES.

Richmond Cheek Rower Co., Richmond, Ind.
Lansing Wheelbarrow Co., Lansing, Mich.

Treating Sour Land.—C. H. W., Cottage Grove, Oreg., writes: "How much land-plaster would be necessary to sweeten an acre of land that produces a fair crop of sorrel? How many bushels of wood ashes, and what are the latter worth per bushel for that purpose? Would charcoal be good to sweeten sour land? There is no limestone here."

REPLY BY JOSEPH:—The "sour" condition of the land is usually due to lack of proper drainage in land containing a great deal of vegetable matter. The first thing to do, and much better than anything you can apply to the soil, is to provide thorough drainage. Let the air get into the subsoil. Charcoal will probably do but little good, as there is already carbon enough in the soil. If your soil is deficient in lime, land-plaster or ashes will provide it. Put in all the wood ashes you can get; they are worth ten to twenty-five cents a bushel as a fertilizer. Gardeners often apply one hundred bushels per acre.

Manure Questions.—H. M., Hewletts, Va., writes: "I can get a quantity of manure from a sawmill. The bedding used consists entirely of pine sawdust. Which is the better, the manure of mules fed on hay and whole corn, or that of oxen fed on hay and bran and ship-stuff? For what purposes would such manure be best adapted, to top-dress wheat, to plow in for tobacco, or for Irish potatoes?"

REPLY BY JOSEPH:—Let the manure get thoroughly rotted. Probably there is little difference in the value of the manure from the mules and that from oxen. It depends greatly on the proper saving of the liquid part. The mule manure is drier and usually richer in ammonia; that of the oxen, fed as stated, may be richer in phosphoric acid and perhaps potash. When well rotted, these manures are all right for any of the purposes named, although I would slightly prefer the manure of the oxen for tobacco and potatoes.

To Prevent Smut in Oats.—H. E. D., Logansport, Ind. In answer to your query we publish the following from a recent station bulletin: Repeated experiments, made at the Ohio experiment station and elsewhere, prove beyond doubt that the loose smut of oats may be almost completely prevented by dipping the seed in hot water. To do this, have two vessels, in one of which water is kept heated to about 120 degrees, and in the other to about 135 degrees. Have a loosely-made basket, with a wire or cloth cover, and considerably smaller than the vessel containing the hot water. Fill the basket with oats, fasten down the cover and set it in the vessel in which the water is heated to 120 degrees. Let stand ten minutes or more, shaking occasionally, so as to get the oats warmed up to this point, then take out and dip quickly into the water heated to 135 degrees, shake or stir vigorously for five minutes, then remove and spread out to dry. Tests made at the experiment stations of Kansas and Indiana show that this treatment not only prevents smut, but increases the yield of grain to an amount considerably greater than that represented by the smutted heads, and this amount, as shown by actual count made at the Ohio station, is often much greater than is suspected.

FERTILIZER DISTRIBUTORS.

Kemp & Burpee, Syracuse, N. Y.

GARDEN IMPLEMENTS.

S. L. Allen & Co., Philadelphia, Pa.

HARNESS.

Elkhart Carriage and Harness Co., Elkhart, Ind.
Sherwood Harness Co., Syracuse, N. Y.

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Gale Manufacturing Co., Albion, Mich.
Hench & Dromgold, York, Pa.
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C. Aultman & Co., Canton, Ohio.
S. S. Messinger, Tatamy, Pa.

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Obern Bros., Mariou, Ohio.

IRON FENCING.

Hartman Manufacturing Co., Beaver Falls, Pa.

LAWN MOWERS.

Chadborn & Caldwell Mfg. Co., Newburgh, N. Y.

PLOWS.

Rock Island Plow Co., Rock Island, Ill.

POTATO DIGGERS.

Prun Potato Digger Co., Hoosick Falls, N. Y.

POTATO PLANTERS.

Aspinwall Manufacturing Co., Three Rivers, Mich.

ROAD MACHINES.

American Road Machine Co., Kennett Square, Pa.

ROOFING.

Kanneberg Roofing Co., Canton, Ohio.

SCALES.

Osgood & Thompson, Binghamton, N. Y.

SPRAYING MACHINES.

P. C. Lewis, Catskill, N. Y.

THRESHING MACHINERY.

The O. S. Kelly Co., Springfield, Ohio.
The Westinghouse Co., Schuectady, N. Y.

WELL DRILLING MACHINERY.

Williamus Bros., Ithaca, N. Y.

WINDMILLS.

The Springfield Machine Co., Springfield, Ohio.
U. S. Wind Engine and Pump Co., Batavia, Ill.
Aermotor Co., Chicago, Ill.

WIRE FENCE.

Sedgwick Bros. Co., Richmond, Ind.

Soil for Potatoes.—R. W. S., Lebanon, Ind., writes: "I intend to plant ten acres to potatoes. Which is preferable, a one-year-old clover sod, or a burned-over stubble field, formerly a clover sod? Shall I plow the manure under, or apply on top after plowing? I doubted my yield last season by heavy mulching or top-dressing after the crop was laid by."

REPLY BY JOSEPH:—I think I would slightly prefer the one-year clover sod, if as rich otherwise as the other field, unless the latter was in clover the year before the grain crop. If there is any difference in the fertility of the two pieces, take the richest by all means. Either of them, if fertile, will be likely to give you a good crop. I would always aim to supply the needed fertility for potatoes by applying the stable manure to the clover or grain crop preceding the potato crop. But if this has not been done, use manure as old and fine as you can get it for putting on the potato patch. Plow under what is in the least coarse, and apply the fine stuff on top. Mulching with coarse manure after cultivation must cease is a good practice, although, perhaps, expensive and not always convenient. Using coarse manure in this way, however, may be safer and often more telling than plowing it under just before planting.

Horse Painting.—O. S., Carrollton, Ohio. The following, from "How to Paint," answers your question: "WHITE PAINT.—Take the white lead from the keg, and mix it in another vessel with linseed-oil to the consistency of thick cream; then add a small quantity of Japan gold size (for dryer), and stir all well together. First coat.—Reduce the above mixture to the proper consistency for spreading thinly and evenly with the brush, with more oil, using nothing else, if durability is desired. Second coat.—To be applied when the priming is thoroughly dry and hard; reduce the foundation mixture to the proper consistency, with turpentine only. Third or other coats.—If necessary to apply more than two coats of white-lead paint to cover the surface, the same preparation as for the second coat may be used, always giving the paint time to harden before applying another coat. For inside-work.—Mix the white lead with turpentine to the consistency of cream; then add to every gallon of paint one half pint of light-colored carriage varnish. This paint can be washed with soap-suds and easily cleaned. This is intended for coating over an old surface. For priming, use the foundation paint given above for outside work."

Free to Our Subscribers.—Subscribers of the FARM AND FIRESIDE who will send this notice and four cents in stamps for return postage to W. B. Eddy & Co., Whitehall, Washington Co., New York, will receive free a trial package of Quinn's Ointment for removing Curls, Splints, Spavins, Windpuffs and all Bunches. Endorsed by Hon. J. I. Case, W. B. Fagis, President Ohio Breeders' Association, and other leading breeders throughout the United States. This offer will not appear again, and is made solely for the purpose of introducing a valuable remedy to our subscribers.

VETERINARY.

Conducted by Dr. H. J. Detmers, Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. DETMERS, 35 King Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column, must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered under any circumstances. This time half a dozen anonymous inquiries found repose in the wastebasket.

Probably Hog-cholera.—J. P. D., Sioux City, Iowa. Your description points toward swine-plague or so-called hog-cholera.

Swine-plague.—F. R. N., Pleasant Unity, Pa. Your pigs have swine-plague, or so-called hog-cholera. See answer to I. G. B. in this present issue.

Looks Like Spavin.—W. J. P., Argentine, Mich., and P. B., Ada, Kau. What you describe looks like cases of spavin. For full information consult FARM AND FIRESIDE of November 15, 1891.

Dog Distemper.—W. L. W., Thomson, Ga. Your dog has had distemper and is now in the second or nervous stage of the disease. He may live, but he will never get well, because the morbid changes produced are irreparable.

Luxation of the Patella.—J. T. R., Pattonsburg, Mo. Your animal suffers from a luxation, or partial dislocation of the kneepan. For further information, see answers given to similar questions in this present issue.

Thorough-pin.—A. J. W., Portland, N. Y. What you described is a so-called thorough-pin, a morbid enlargement of the capsular ligament of the hock-joint. For further particulars see recent numbers of FARM AND FIRESIDE.

Bone-spavin.—H. P., Salem, Oreg., writes: "Is bone-spavin curable? If so, would you kindly tell me how?"

ANSWER:—Consult FARM AND FIRESIDE of Nov. 15, 1891, where you will find your question fully answered.

Actinomycosis.—H. G. H., Nodway, Iowa. Your description indicates actinomycosis, or lump-jaw. If the swelling is hard and immovable, a cure is out of the question. If it is movable, have applied the treatment repeatedly described in these columns.

Rat-tail.—A. J. F., Point Rock, Ohio. Your mare is developing a so-called rat-tail. There is no cure, because hair cannot be produced where they have ceased to grow. A further loss of hair may be prevented by keeping the tail clean with soap, water and brush.

Abortion.—X. Y., Logan, Ohio. Animals—mares as well as cows—that have aborted are apt to abort again at about the same period of gestation. If you want to breed your mare, and risk another abortion, my advice would be to breed her in the spring after she has been at pasture a couple of weeks.

Ringbone.—J. W., Johnstown, N. Y. Your question is fully answered in FARM AND FIRESIDE of Nov. 15, 1891. Queries concerning spavin and ringbone will be answered once a year in one of the November numbers. They come in twice every month, and consequently too often to be answered each time.

Poll-evil.—F. J. H., Oakley, Idaho. What you complain of is a poll-evil, and can be removed and cured only by a surgical operation. But since it has remained unchanged for a long time, and since no veterinarian to perform the operation is available, my advice is to leave the swelling alone; or at least, not to irritate it by external applications.

Spanish Itch.—Mrs. B. K., Rochdale, Texas. What you inquire about is a disease peculiar to the South, and not at all or but very little known in the North. You will get more reliable information than I am able to give you if you address Dr. M. Francis, professor in the A. and M. College of Texas, College Station, Texas.

Lumps.—J. H., Gibbon, Neb. The lumps on each side of the windpipe you complain of may be the enlarged thyroid glands, so-called goiter; but that would not seriously interfere with eating and drinking. There are undoubtedly other morbid changes in the throat (larynx or pharynx), which require an examination by a veterinarian.

Partial Dislocation of Patella.—J. A. B., Savage, Neb. Your colt, it seems, suffers from a partial dislocation of the patella. The case, being an old one, is very likely incurable. If you desire, notwithstanding, to subject the animal to treatment, you may follow the directions repeatedly given in these columns concerning the treatment of a partially dislocated patella.

Periodical Ophthalmia.—A. W. W., Edinburg, O. writes: "I have a yearling colt that goes blind every full moon. What is the matter, and can it be cured?"

ANSWER:—Your yearling colt suffers from periodical ophthalmia. Perhaps one of its parents is similarly affected. It is incurable. For further information consult recent numbers of this paper.

Paraplegia.—F. L. B., Rosendale, Mo. Your sow suffers from paraplegia, or paralysis in the hind quarters; but whether it is caused by an affection of the spinal cord and its membranes or a morbid condition of the muscles does not appear from your description. It is probably the former. There is no prospect of a cure. Diseases cannot be prevented by medicines.

Liver Flukes.—J. M. V., Shamblings Mills, W. Va. Your calves, very likely, suffer from fluke-worms (*Distoma hepaticum*) in the liver. There is no remedy. You may prevent the disease in the future if you keep your calves away from low and wet ground and from pools of stagnant water. Especially from water that contains small snails, because it is the latter that harbor the embryo worm-brood.

Poisoned with Strychnine.—A. V. B., Jutland, N. J., writes: "What ailed my dog? Thursday morning he ate his breakfast and seemed to be well. About 10 o'clock something was the matter with him. He panted just like a dog in warm weather; then he sat up and threw back his head and jerked all over. I gave him some sweet milk, which he drank. Then he laid down and stretched out full length and was stiff. When that passed off he lay and panted. He died in about two hours from the time he was taken sick. He did not froth at the mouth."

ANSWER:—Your dog was poisoned with strychnine. Narcotics constitute the physiological antidotes, but if the dose of the strychnine given is sufficiently large, can do any good only if administered at once.

Swelled Joint.—J. A. J., Rochester, Kan., writes: "I have a horse eleven years old that strained his left fore leg in the ankle, two years ago. At times he is very lame, but at other times, especially when I work him hard, he limps scarcely any. The ankle is swelled on both sides; the swelling is hard. Do you think I can do anything to help him?"

ANSWER:—No. Such an old case is incurable.

Difficulty of Breathing.—I. L. O., Oakland, Md. Your mare suffers from a chronic difficulty of breathing, probably due to a chronic catarrh or inflammation of the respiratory mucous membrane. Either have the animal treated by a competent veterinarian, or give her the benefit of a good pasture as soon as sufficient new grass has made its appearance, and of course exempt her from work.

A Raw Sore.—S. B., Central Park, Mont. What you complain of may be a fistula; hence, you must first closely examine and probe it. If there is no fistulous opening, you may destroy the luxuriant granulation (so-called proud flesh) by a few applications of finely-powdered sulphate of copper, and then apply to it, twice a day, until it is healed, a little iodoform. Besides that, keep the sore scrupulously clean.

Turning on the Nose.—M. Van D., Lincoln, Neb., writes: "Please inform me if it is injurious to a horse to cleave his legs from mud by turning the nose on them supplied from a hydrant?"

ANSWER:—Turning on the nose is apt to cause a disturbance in the circulation of the blood, and may be followed by bad consequences. Better take a little more pains and clean the legs of your horses in another way.

Been Stiff for Five or Six Years.—J. W. S., Reading, Mich. You can hardly expect to have a horse cured which has been stiff for five or six years. Maybe the stiffness is only apparent, and that the seat of trouble is in the feet; in other words, the horse is foundered. In that case, you may effect some improvement, but no cure, by keeping the horse well shod with bar shoes. Any good blacksmith knows how to make them and how to put them on.

Don't Like Horns.—J. C., Algonquin, Ohio, writes: "Please tell me what treatment you would recommend to prevent the growth of horns on calves."

ANSWER:—If you don't like cattle with horns you should raise mules. I don't believe in making improvements on nature, and do not advocate and shall never lend a hand in depriving cattle of the horns with which nature has provided them. I regard the whole dehorning business as a cruel and unnecessary fad.

Blood-spavin.—W. C., Saratoga, N. Y. Blood-spavin is a term applied to an abnormal enlargement of the vein (Vena saphena) on the anterior part of the inside of the hock-joint. If you had read the veterinary column a little more carefully, you would know the treatment you mention does not apply to blood-spavin, but to bone-spavin, an entirely different affection. If you mean bone-spavin, and have the terms mixed up, I refer you to what has been said in FARM AND FIRESIDE of November 15, 1891.

Indigestion.—B. B., Syracuse, Kan. If your horses suffered from indigestion their appetite would, very likely, be disturbed; but this, it seems, is not the case. It is more likely that either the composition of the food you give is radically wrong, or that you feed much more corn than the horses are able to digest, and that in that way all the vital energy of the animals is exhausted by the process of digestion. If this is the case you will find, as a sure indication of it, that the dung has a very offensive smell.

Diabetes.—L. H., Milford, O., writes: "Can you give me any information about my three-year-old mare? She urinates frequently and but little at a time. She flinches when I press on her loins. Is it kidney disease? Would you breed a mare at that age?"

ANSWER:—Diabetes in horses is usually caused by feeding musty oats. Change the feed. Whether it is advisable to breed a mare at the age of three or of four years depends upon the development of the animal. An undeveloped animal should not be bred.

Sick Cattle.—Mrs. J. B. S., Mikesville, Fla. Although I am not acquainted with the nature of food fed to cattle in Florida, it seems to me the food your cattle receive lacks some necessary constituents, and is defective, either in quality or quantity, or in both. What your cattle need much more than a book of reference is good, sound and nutritious food in sufficient quantities, regularly fed. As to books, I have made it a rule never to recommend any particular book. My reasons, which I think are valid, have repeatedly been stated.

Probably a Luxation of the Patella.—C. L. H., East Port, Mich. The lameness of your animal, possibly, may be of a rheumatic character; but it is very likely due to luxation, or dislocation, of the knee-pan, sometimes in one, sometimes in the other hind leg. For further information I refer you to the answer given to a similar inquiry in this present issue. The recent swelling of the hind leg mentioned in your postscript has another cause, and has nothing to do with the original lameness. It is probably phlegmonous erysipelas.

Respiratory Disorder.—J. H. C., Raymond, S. C., writes: "I have been working my horse about three months. About three weeks ago he began to get poor. He eats heartily but is falling off very much. He has a thumping in the side and a running at the nose."

ANSWER:—Your mare is suffering from some disorder of the respiratory organs; more I cannot say, because it does not proceed from your meager description whether the same is affected with heaves, chronic catarrh or some other disease.

Periodical Ophthalmia.—M. B. R., Raphine, Va. Your mare, it seems, suffers from periodical ophthalmia, a disease which almost invariably leads to blindness. Light diet and moderate exercise may somewhat retard the complete loss of sight. Applications of an eye-water which contains a minimum quantity of atropine—any good druggist will prepare it for you if you will tell him what it is intended for—will prevent the contraction of the pupil, and thus somewhat preserve the appearance of the eyes; but it will not prevent the final loss of sight.

Heaves.—L. H., Deer Creek, Ohio. Your horses have heaves. You probably fed them musty hay. A cure is out of the question. The horses, however, will breathe easier and cough less if you feed them no hay at all. Give them instead of it some nice, clean straw, and make up the deficiency in nutrient elements by feeding more grain. Besides that, see to it that the horses do not get too much voluminous food and that their hovels are not coative. Further, the premises or stable in which the horses are kept must be well ventilated and not too warm.

Itching.—J. G. E., Revere, Mo. Itching and persistent rubbing may have various causes. So, for instance, besides vermin, it may be caused by mange, by a filthy or unclean condition of the skin, or even by measles. Measly hogs seem to experience an itching sensation, but they usually emaciate. Besides that their squeal is hoarse, and the presence of the cystworms is easily ascertained at the sides of and below the tongue. Give your hogs a few good washes with soap and warm water, and keep them in clean quarters, and perhaps the itching will cease.

Lice on Horses.—W. S. S., Warren, Ill. Lice can be destroyed by a great many things if properly applied. A thorough wash with a tobacco decoction is about as good as anything. But, of course, it must be applied on a warm day, and at the same time the stable must be thoroughly cleaned. If it is not done, then all the lice that are in the bedding, etc., will soon be on the horse again. Besides, it is essential to invigorate the animal organism by feeding sufficient quantities of good and nutritious food. The lower the vitality of the host, the more thrifty its parasites will be, and vice versa.

Swine-plague, or So-called Hog-cholera.—I. G. B., Fontainebleau, Mo. Your hogs have swine-plague, or so-called hog-cholera. Separate those yet healthy from the sick ones, and take them to a high, dry and clean place, destitute of any trash and rubbish. There have their wants attended to by a person who does not come near the sick ones. In short, keep them strictly separated. After the last of the sick ones has died, burn all the trash and rubbish on the premises, and see to it that all the carcasses of dead animals are either buried sufficiently deep, or, what is better, cremate them.

Wart on the Eyelids.—O. B., Northville, S. D. A wart on an eyelid is usually best removed by painting it over, by means of a camel's-hair pencil, with a concentrated solution of corrosive sublimate in strong alcohol; but great care must be exercised to bring the solution in contact with nothing but the wart. If the wart is a large one, the operation may be repeated several days in succession, or until it becomes apparent that the wart is decreasing in size. As soon as that happens it may be left alone. As to your second question, the treatment entirely depends upon the nature and extent of the injury produced.

Probably Tuberculosis.—D. C., Westboro, Mo., writes: "I have a cow that is afflicted with a cough. Her breath is very offensive. She is stiff in fore legs and is very thin in flesh."

ANSWER:—Your rather meager description points towards tuberculosis. If you desire a definite diagnosis, have the animal examined by a competent veterinarian. It may be, though, that you will soon have an opportunity to make a post-mortem examination, and the diagnosis will be easy enough. Watch your other cattle, and if this proves to be tuberculosis, destroy every animal that shows the same symptoms.

Luxation of the Patella.—W. B., Burden, Kan. Your mule suffers from a luxation, or partial dislocation, of the patella or knee-pan. Keep the animal in the stable, tie her so that she cannot lie down. Push the knee-pan into its proper place if it is out of it, which you will be able to do if some assistant takes hold of the foot and pulls it as far forward and up as high as he can. Then apply a blister on the sides and below the knee-joint, and repeat the application when the effect of the blister disappears. It will take perhaps several weeks before the ligaments of the knee-pan have sufficiently contracted to keep the latter in its place. The animal must be kept standing.

Probably Actinomycosis.—G. H. Y., Savonburg, Kan., writes: "I want to know what ails my cow. About six weeks ago a lump as large as a man's fist came at the end of the left jaw-bone. Since the first one three others have come between the eye and nose. They seem to be connected by a cord. They are not attached to the bone. The cow is in good flesh and eats and drinks all right."

ANSWER:—What you describe seems to be a case of actinomycosis, or so-called lump-jaw. Apply the treatment repeatedly described in these columns, provided the "lumps" are movable—not firmly attached to the bone.

Skin Disease on Sow—Sick Calf.—B. S. D., Sugar Run, Pa. Maybe your sow is lousy; if so, give her a good wash with a tobacco decoction and at the same time clean out her pen. Your calf may not get suitable food, or if it does now may not have received it while it was young; and its digestion and power of assimilation may thus have been impaired. Sometimes yearling calves suffer from lung trouble, even from tuberculosis, or if they have been pastured during the summer on low, wet ground; or in a pasture where they had to take their drinking water from a stagnant pool, they are frequently infested with intestinal worms.

Skin Disease.—B. J., Rosewood, Alabama, writes: "I have a mule that is constantly rubbing herself against the fence and other objects. She has rubbed the hair off in several places. Her skin is smooth. She is in good order and hearty, and seems all right except the rubbing."

ANSWER:—Examine your mule and see what causes the itching, whether it is lice, chicken-lice or dirt, and then apply the proper remedy. If it is lice, a good wash with a tobacco decoction will remove them, provided the stable at the same time is subjected to a thorough cleaning. If it is chicken-lice, banish the chickens from the stable.

Abscess in Mammary Gland.—J. C. B., Wistor, Pa. Such an abscess as you describe first needs careful probing, then the external opening, if higher than the lowest part of the abscess, must be enlarged in a downward direction sufficiently to allow the pus to be freely discharged from every part of the abscess. Or else a new lower opening must be made. After this an easy discharge of the pus is provided for; the interior of the abscess should be dressed with a suitable antiseptic. This may be done by filling the abscess with absorbent cotton saturated with a four or five per cent solution of carbolic acid. This dressing must be renewed twice a day. The other teats must be milked.

A Kicker.—J. P. W., Delmont, S. D., writes: "I have a filly, half Texas pony and half horse, coming four years old this spring, which is what I call a switch-tail kicker. I have driven her a few times by using a tight over-check and also a kicking-strap. This kicking-strap is a strap fastened to each hind foot and running through a ring on the girth. The ring is fastened by another strap running between her front legs to the collar. This arrangement does not appear to interfere with her traveling, but if the tongue or anything touches her she struggles to kick and soon makes her pasterns sore."

ANSWER:—Try to gain the confidence of your animal by gentle treatment; and convince her that not everything which touches her will hurt. If you don't succeed I cannot advise you.

Diarrhoea in Goats.—C. H. W., writes: "What can I do to stop the scours in my Angora goats. I have lost twenty-two out of sixty-five. They have been running in the brush—oak, willow, hazel, arrow-wood, fir and salal. I have changed their range three times, and have put them in the field and fed them grain and hay."

ANSWER:—It does not proceed from your description what may be the cause of the diarrhoea. As long as the cause is not known and removed, a permanent cure cannot be expected. Perhaps your water contains a great deal of alkali, which would act as a physic, and thus cause chronic diarrhoea.

Probably Chronic Indigestion.—M. E. A., Frost Station, Ohio, writes: "What is the matter with my colt? He is poor and does not have any appetite. He had the distemper last winter. He eats hay well, but will not eat grain."

Your animal suffers from chronic indigestion, but whether the same is caused by the presence of intestinal worms, by a chronic intestinal catarrh or chronic gastro-enteritis, or by both, cannot be decided without an examination. I would advise you to give your colt the benefit of a good pasture as soon as sufficient new grass has made its appearance. Meanwhile feed nutritious food easy of digestion.

Chronic Garget.—A. N. C., Midway, Neb. What you complain of is an ulcerating process, probably in the milk cistern, due to a previous attack of garget. I would advise you, after you have drawn out the pus, to make an injection through the teat with a three-per-cent solution of carbolic acid. Or, if you find this too difficult, and don't mind to disfigure the cow a little, then the best would be either to split up the teat lengthwise clear into the milk cistern, or to cut it off entirely, and then dress the ulcerating cavity twice a day by filling it with absorbent cotton saturated with a three-per-cent solution of carbolic acid. This operation may be performed without any hesitation, because the affected quarter of the bag is lost for milk production forever, and can in no way be restored to a healthy condition.

A Collar-boil.—A. F., Cisco, Texas, writes: "Please tell me what to do for a three-year-old mule that had a knot under the skin, about the size of a grape, on the point of the shoulder. It was movable, and I cut it out; but it still continues to grow. I cut a hole in the collar-pad to keep from touching it; but sometimes it will rub and get the fresh skin off by rolling. Before I cut it the hair covered it. Now it looks raw. It seems to be only connected with the skin. It was round; now it looks more flat."

ANSWER:—If you had thoroughly removed the collar-boil, or tumor, it would not have reappeared. As it is now, you may endeavor to destroy it by applying finely-powdered sulphate of copper to the raw surface, and exempt the animal from work until a healing has been effected.

Knuckles Over.—A. P. C., Bowdle, S. D., writes: "I have a mare that seems predisposed to knocked ankles. Her hind ankles crook forward in the pastern-joints. Sometimes they are all right, but get crooked again. After she took a run of several miles, we noticed that both joints were crooked."

ANSWER:—The knuckling over, or incomplete luxation of the pastern-joints, is caused by overwork, and is subsequent to overstraining of the ligaments. The treatment requires rest and voluntary exercise and good, nutritious food. Some good may also be done by a blister (oil of cantharides, prepared of cantharides, 1 part, and oil, 4 parts, beaten for an hour in a water-bath) applied once a week to the front and sides of the affected joints. Nothing, however, will effect a cure, or even an improvement, if the animal is trained, run on the race track, or used under the saddle, or compelled to pull loads.

Not Thrifty—Wolf-teeth.—C. A. S., Glenburn, Pa., writes: "I have a young horse about six years old that eats well but don't look right—his coat is rough. He don't get in good order no matter what I feed or how much; he appears to feel good but is a lazy driver; his dung smells more offensive than the other horses'. What would you give him?—Do wolf-teeth, so called, in colts and horses affect the eyesight, and should they be pulled out?"

ANSWER:—Maybe you feed your horse too much; at least, the offensive smell of the dung is an indication that the animal eats more than it can digest. In about a month let the horse have a run at pasture of several weeks' duration. So-called wolf-teeth, which are either small supernumerary teeth, or unabsorbed remnants of the first pair of milk-molars, are very innocent, and have no connection with the eyes.

Chronic Inflammation.—A. H. K., Stillwater, Okla., writes: "My mare has something the matter with her water. It is highly colored, but often of small quantity and very offensive. She gaunts up badly all the time."

ANSWER:—Your mare, it seems, suffers from chronic inflammation, or, maybe, ulceration of either the vagina or the uterus, or both. The best thing would be to have her carefully examined by a competent veterinarian. If none is available, you may try injections of a one-per-cent solution of corrosive sublimate, one part, to two thousand or fifteen hundred parts of water. The fluid, when injected, must be blood warm, and the injections themselves must be made very carefully. A quart of fluid at a time may suffice, and the injections may be made once or twice a day. In about a week it will be seen whether any improvement is effected or not.

So-called Sand-cracks.—G. K., Amanda, W. Va., writes: "I have a three-year-old mare that has had short cracks or splits in her front hoofs for some time. Two weeks ago one of her hoofs split up almost to the hair and she is very lame."

ANSWER:—First, let your blacksmith put the hoofs in as good condition as can be done, and shoe the horse in such a way as will bring but little bearing, or none at all, upon the parts where the cracks are, and will not cause the latter to split further up. This done, let him make a cross cut, deep enough to extend through the wall of the hoof, at the upper end of the crack or split, so as to form with the latter a figure T, and then let him, carefully, of course, put a rivet (a thin hoof nail) through the borders of the crack, about midway between the coronet and the shoe, so as to keep the crack closed, and to prevent any further splitting of the horn.

May be Thrush.—A. H. R., Felder, Washington Co., Texas, writes: "I have a horse that is affected in a peculiar way. I first noticed that his hind legs were swollen. In a few days his fore legs commenced to swell. On examination I found his feet very sore and tender. The frog of each foot was decayed, for I trimmed them off nearly smooth without its seeming to hurt him. His legs are still swollen and feet tender."

ANSWER:—What you describe may be thrush. If so, clean out the hoofs, cut away all loose and diseased horn, and then, while

holding the horse's foot so as to bring the sole in a nearly horizontal position, but with the toe a little lower than the heel, pour some pure carbolic acid onto the ulcerous parts, but see to it that the acid comes nowhere in contact with the skin. This done, keep the horse on a dry and clean floor, and, if necessary, repeat the same treatment in a few days.

Starved.—I. C., Ashland, Col., writes: I have in my care a mare about which I would like your advice. Her owner says she was a fine animal when he left her in a pasture; she was there until fall. When he sent for her the pasture was so short she was almost starved to death, and has never thrived since. She acts stupid, and when she takes salt or ground feed, will gnaw to the bottom of the box. I had her teeth examined by a man who pretends to know; he says they are all right. Some thought she was 'loosed.' If so, is there any remedy? She looks hidebound."

ANSWER:—It may be that the mare has eaten loco-weed (*Astragalus mollissimus*); but it seems to me a thorough derangement of the digestive organs, brought on by starvation, is sufficient to account for her condition. Good care and wholesome food easy of digestion, would constitute the treatment.

Hemorrhage from the Nose.—C. G. D., West Gloucester, Mass., writes: "I have a horse that frequently has hemorrhage from the nose while driving on the road. Is any serious result likely to follow? The same horse received a severe chafe from a rope under the fetlock last October. It has finally healed, leaving an unsightly callous as large as a goose egg. Can anything be done to remove it?"

ANSWER:—Hemorrhage from the nose is quite a serious thing, because some severe morbid changes are always at the bottom of it. In some cases it is a sarcoma; in others it is glanders; and in still others it may have other causes. It is therefore necessary to subject such a horse to a thorough examination by a competent veterinarian. A callous scar on the fetlock cannot be removed except by excision. And then the new scar, unless the treatment is a very careful one, may be as bad or even worse than the one which has been removed.

Diseased Shoulder-joint.—C. M., Purdy, Mo., writes: "I have a mule that had a kick about five months ago on the shoulder-joint. The first day there was no swelling, but she would not step on that leg. The next day it was swelled big. Believing there was nothing broken, because she could lay down and get up easy enough, I only rubbed the place with strong liniment. After a few days the swelling grew less, but she did not step any better. About a month ago she had a big abscess between the front legs, but now it is all gone and she is yet about the same. The swelling of the flesh is all gone, but the bones are about twice their former size. She steps on the end of the foot; then the leg is crooked. Do you think there is any hope for her to ever get well?"

ANSWER:—There was either a luxation (dislocation) of the shoulder-joint, or a fracture in the lower end of the shoulder-blade or upper end of the humerus near the joint. There is no hope that the animal will ever get well.

Looks Like Septicæmia.—F. S. B., Normal Square, Penn., writes: "Quite a number of farmers have trouble with their cows after they drop their calves. We have one sick now whose calf is seven days old. She refuses to eat anything but a little bright hay (no meal at all). She hangs her head, ceases to chew the cud, and her milk has a bad odor. She swallows with difficulty. The droppings are hard and dark colored. Bad cases seem to be partly paralyzed. The trouble generally starts when calves are a week old; some, though, at two weeks. Our cows never get sick if they calf in summer, while in pasture, or first part of winter."

ANSWER:—What you describe looks like an infection with septic bacteria. I therefore would advise you to keep your cows, especially when calving and immediately after, in premises kept scrupulously clean, dry and well ventilated. If you do this, probably no new cases will occur. You say yourself you have no trouble in the summer when the cows are at pasture; hence, the causes must be sought for in their winter quarters. If you have an underground stable, better keep your cows when calving time comes, above ground in a dry place and in a pure atmosphere.

Probably Lung-worms.—W. O. W., Horn Lake, Miss., writes: "I would like to know what to do for hogs that are affected as follows: Dry, rapid, gasping cough, lasting sometimes for several minutes without a break, then an interval of some time and another spell of coughing. Several weeks of this with good appetites; then they cease to eat. The under jaw and throat swells, on one or both sides. The swelling continues to grow worse for several days and then the hogs seem to choke. There are long intervals between each breath, and at last when they can't breathe at all, they paw at their throats and jump several times high in the air, and then fall back dead."

ANSWER:—Your hogs, it seems, according to your description, are affected with lung-worms (*Strongylus paradoxus*). You can easily ascertain whether this is so or not, if you make a post-mortem examination of the next one that dies, and cut open the bronchial tubes in the lungs with pointed scissors. If it is lung-worms you will find them (thin worms looking like ends of thread) in large numbers in the finer bronchi, and will also find the lung tissue morbidly changed. There is no remedy; but you can prevent the disease if you keep away the new generation of pigs from low and wet places and pools of stagnant water.

Costs More.

The BUCK-THORN FENCE costs more than common barbed wire, but a dollar is worth more than fifty cents; and so with B. T. as to B. W. There is always a market of the better quality for better goods, at better prices, and that is why the BUCK-THORN BARB FENCE, although costing more than barb wire, sells well wherever known. It is the Strongest, the most Visible, the Handsomest, the Best barb fence in the world. Send us your address; we will send you descriptive circulars and samples by next mail.

THE BUCK-THORN FENCE CO., Trenton, N. J.

"The King Fence." I am well pleased with my fence, for it is the king fence here, and I am on the road where every one who sees it says it is splendid.

T. KEGAN, Morrellville, Neb.

MENTION THIS PAPER WHEN ANSWERING ADVERTISEMENTS.

Our Fireside.

BESIDE THE CRADLE.

There, in his tiny cot, he is sleeping a sinless sleep—
Here, by his cradle-side, I sit and watch and weep.

Watch, with the thought of his future searing my
weary brain—
Weep, for the toll it will bring him—the sorrow, the
care and the pain.

Have I not done him a wrong, in flinging him into the
strife?
Will he thank me one day, think you, for the thankless
gift of life?

Calm is his baby slumber, with rosy lips apart;
Ah, me! to think of him sleepless, tossing with aching
heart!

Deadly the struggle for bread—fiercer and fiercer it
grows;
Will he stand or fall in the battle, my darling one?
God knows!

Dreary the dull, sad round, from morning till evening
light—
Out to the desk with the day, home from the desk at
night.

Will life have nothing better to offer my dearest one?
Then better, a thousand times better, his life had
never begun.

Yet, if success be his lot, will happiness come in its
train?

Or is that but a phantom light, that we follow, but
never attain?

Success! To be fawned on by some, reviled and be-
littled by most;
Hated for winning the race by the crowd who have
struggled and lost.

The snares of the evil women are waiting his feet to
entwine,
And the rattling lure of the dice-box, and the strong,
arch-curse of wine.

His heart will be torn by the cry of the hungry he
cannot feed,

While Dives rolls by in his chariot, and Lazarus dies
in his need.

And the clash of contending creeds will hurtle about
his head,
But the world will be dark and cheerless, as though
goodness and God were dead.

Have I not done him a wrong in flinging him into the
strife?

Will he not pray for the rest that ends our poor,
wearisome life?

* * * * *
There, in his baby cot, he is sleeping a sinless sleep,
Here, by his cradle-side I sit, and watch and weep.

—Alfred Berlyn

THE WAY OF LIGHT.

The QUIET village street was utterly deserted that hot July afternoon. It was the sacred hour when all the good people of Dexter were taking their usual afternoon siesta. The village itself seemed to be taking a perpetual nap which would probably never be disturbed. The very dust lay in the road and on the leaves as if no rampant wind ever played riot with it. The great elms, which stood like sentinels on either side of the street, seemed holding their breath for fear of awaking the slumbering town.

Two adventurous young people, however, were playing tennis in a listless way behind the high cedar hedge which separated one old mansion from the street, their fresh voices, with now and then a ripple of girlish laughter, chiming in and seeming to intensify, not break, the stillness. Presently the rackets were thrown down, and they seated themselves on the grass under a maple-tree, to talk in low murmurs, with now and then one of those silences without which no conversation is complete.

The old, square, dingy-white house stood back from the road, surrounded with an ample expanse of grassy lawn, kitchen and flower gardens, and tennis ground. Its weather-beaten roof had sheltered generation after generation of Badgers, but the family had gradually died out, or drifted west and cityward, after the way of New Englanders, and now there were only two left in the old homestead, Helen Badger, the sweet, patient invalid who had not left her bed for many years, and Mrs. Sophia Phelps, a widow, and the busy and bustling Martha of the household.

To this quiet haven of peace and plenty had drifted our heroine, Dorothy Forbes, young, sweet and captivating, fresh from school, and detailed to rusticate for a little until there was a prospect of the elder Miss Forbes' marriage; for Miss Dorothy was altogether too pretty to appear just at present.

As for Jack Badger, a cynical young Amherst senior, what charm had brought him to this out-of-the-way home of his ancestors was a problem, the key to which was locked in his own breast. Rumor, in the shape of college friends, ascribed his sudden withdrawal from civilization to a city belle who had made some sensation in Amherst society the preceding winter, and had carried away several scalps at her belt. However this may be, Jack was here, and Dorothy was here. Let us watch developments.

They were cousins, just distant enough to add a charming flavor of possibility to their relations. A pretty cousin is much better than a sister, as every young fellow knows. Jack was not yet old or cynical enough to experience a thrill of pleasure as he took Dorothy's soft, dimpled hand in his own, and traced out the criss-cross wrinkles on the

pink palm with his forefinger, calmly anguring her fate.

"You are in love, Cousin Dorothy, the fates tell me."

"Do the fates tell you, or your own conceit, Cousin Jack?" which sally brought a flush to the fair and the brown cheek. "Love? What is love?" pursued the young philosopher. "It is simply a delusion, a state of imagination in which one perceives in the beloved object all sorts of virtues which never existed. Don't think I shall ever be so foolish as to endow some ordinary person with qualities which he never possessed. When I marry, it will be solely from mercenary motives, a question of where I can find the most money."

"Don't talk so, Dorothy," cried Jack, so sharply that she started at the pain in his voice. "For heaven's sake don't let match-making relatives and the shams of society change you from the sweet, pure girl you are now to a mercenary flirt like the society women I know. Promise me you won't talk or do so, dear."

His voice was very pleading and his dark eyes very near hers, so what could she do but laugh and blush and promise, with a strange, sweet thrill at her heart? Poor Dorothy! So rapidly learning that saddest and sweetest lesson of all we have to learn.

Promptly at four o'clock Dexter began to awaken and to prepare for tea at five. At that hour the tinkle of a silver bell summoned Dorothy and Jack to the cool, dainty dining-room, where "Aunt Sophia" presided over a tiny table with fragile old china and shining silver, where the snowy bread, delicious raspberries, first of the season, pink dried beef, fragrant tea and golden sponge cake made a tempting repast.

There was a quaint air of old-fashioned hospitality, of solidity and worth over all the house, even in the dark and forbidding parlor, that bugbear of old New England houses, where the slippery horse-hair sofa had a knowing look, as if it were thinking of the many lovers who had there "sat up" in solemn state on Sunday nights. But the cozy sitting-room was the room they liked best, with its well-worn rag carpet, its comfortable chairs and useful table, the open fireplace, now kept filled with green leaves and flowers by Dorothy's willing hands, and the cool, little vine-shaded porch, where they sat these summer evenings, listening to the music of the frogs and an occasional whippoorwill.

Out of the sitting-room opened Aunt Helen's bedroom, where lay the "soul of the house," as Jack called her, her sweet, white face and patient eyes telling of pain and sorrow bravely borne and nobly conquered. Many an hour did Dorothy spend by her side, reading to her, or better yet, talking in low tones of life, its sorrows, mysteries and compensations. Many things were revelations to this city girl, fresh from a fashionable school, whose only idea of the future was as a fair garden of promise; but she was growing, mind, soul and heart, in these summer days, though perhaps the most in heart.

All too swiftly passed the days with reading, riding, rowing, tennis, letters, long rambles with "Cousin Jack" as protector, and the various socialities of the neighborhood; and Dorothy was able to laugh at and pity "the girls" who were spending the summer at fashionable resorts. She was rather an old-fashioned little maiden, and would have found it hard to confess even to herself what made the charm of this sweet summer; but older eyes see clearer, sometimes, and Aunt Helen often sighed as she saw how completely Dorothy's happiness was becoming dependent on Jack's favor. She had been, thanks to Madame Prinaud's strict regime, tolerably well protected from flirtations, and now that her prince had come, she would give him her whole heart, frankly, unreservedly.

One beautiful calm evening, while Aunt Sophia dozed by the window, Dorothy and Jack sauntered down across the lane to the river. It had been a wonderfully happy day for Dorothy, meaning that Jack had been unusually kind, and the silvery moonlight lying across the water was not calmer or more peaceful than her face. As often with quiet natures like hers, the feelings, though hidden, were fully as strong and enduring as those of more impulsive natures.

It was no girl's ephemeral passion that she gave Jack, but a woman's strong, tender and steadfast love. Thoughts of it and of him filled her mind and made her face very fair and sweet as they launched a tiny skiff and floated down the stream. Neither of them spoke much, the silence being too exquisite to break, and the only sound was the soft splash of the water against the boat. Presently they entered the woods and floated on, the great trees arching over head, the moon still making a broken path across the dark water.

In after life the thought of that evening came back to Dorothy like a sting of a half-forgotten sorrow. She could feel again its subtle charm, compounded of youth, hope and love, see the dear face opposite, hear the ripple of the water, the splash of oars.

When the voyage was over, and Dorothy stepped from the boat, she made a misstep and would have fallen into the water had not Jack caught her in his arms. For an instant he held her close, cradling her slight form until she could hardly breathe, and when he released her, stooped and pressed his lips to hers tenderly, the first lover's kiss she had ever known.

"The happiest evening of my life," she wrote in her diary that night, and the words were prophetic as well as retrospective. But she could not know.

The next morning's mail brought a letter for Dorothy which she read at the breakfast table, pshawed at a little, and then, turning to her aunt, said:

"Aunt Sophy, do you want another boarder for a little while? Mamma writes that my friend, Evelyn Bradford, desires a rest from Newport's dissipation, and would like an invitation to spend a short time with me."

Jack started at the sound of Evelyn Bradford's name, and then said, with an assumption of carelessness:

"I used to know an Evelyn Bradford. Is it the same one, I wonder, Dot?"

"My Evelyn is a New York girl, no relatives, rich, travels a great deal, and now I think of it, she did spend last winter in Amherst. Did you meet her there?"

"Yes, I met her." And Jack's thoughts flew back to that blissful time when he had been permitted to lay his devotion at Miss Evelyn's feet, only to find that "she was so sorry, she had thought him such a good friend, had no idea of anything else," etcetera.

He had resolved, with the stern decision which means so much with a boy of twenty-one, that he would tear her image from his heart, and with a view to furthering this laudable decision, had tried his best to fall in love with his cousin Dorothy, indeed, thought he had succeeded until this announcement of Evelyn's coming. Now the sweet, wild hope of seeing her once more made the blood run faster in his veins, though he cursed himself for his folly.

In the end Evelyn came, a tall, languid brunette, whose vivid coloring paled Dorothy's fair beauty, and before she had been in the house twenty-four hours, she had Jack just where she wanted him, at her beck and call as of old, and poor Dorothy was watching this little drama with wondering eyes and aching heart.

Good-bearded, certainly, a trifle worldly, something of a coquette and very fascinating, was Evelyn Bradford. She and Dorothy were the kind of girl friends who are very devoted when together and very indifferent when separated. As time passed Dorothy withdrew more and more from the society of Jack and Evelyn, and very often sought refuge in Aunt Helen's room, where the invalid watched with anxious heart this sorrow come upon the girl who had grown almost as dear as her own child. But the situation was too strained to remain in this way long. The end came very soon.

One pleasant, sunshiny afternoon, when mere existence was a joy, Dorothy took a book and shawl and went down to the summer-house near the river, a tiny wooden building with battered sides, overgrown with woodbine. She threw herself down on the shawl and tried to read, but soon fell asleep, only to be awakened by voices outside. It was too late to escape, she dared not betray her presence, and so was forced to stay and listen to words which cut her heart like a knife.

"Why did you come here?" Jack was saying passionately. "If you had stayed away I might have learned to forget you and to love my cousin Dorothy, dear little girl, but now—" and he finished the sentence with an expressive gesture.

"Why need you forget me?" Evelyn said in the soft tones she knew how to use so well.

"Why need I forget you? Do you suppose that I want to waste my life crying for the moon?"

For answer, Evelyn hummed under breath a strain from that song of Jean Ingelow's which has voiced the sorrow of many hearts:

"How could I know I should love thee away
When I did not love thee near?
How could I know I should love thee to-day
Whom that day I held not dear?"

Jack's breath came fast. Evelyn was pulling a leaf to shreds with tremulous fingers and flickering color. He leaned toward her and said, with the light of a great, new hope dawning in his eyes:

"Evelyn, dear, do you mean that it is different now from last winter? Do you mean that you ever could learn to love me a little, my darling?"

She gave him no verbal answer, yet he seemed perfectly satisfied.

To the lovers these moments had fled with their characteristic speed, but to the girl lying prone on the floor only a foot away from them, her whole body convulsed with silent, tearless sobs, it seemed an eternity since she had come there, careless and happy. And so this was the end, the end of all her hopes, of all her dreams. If only life would end also! But no—she must get up and go in, and laugh and talk and work and play day after day and year after year, just as if she had not lost all that made life worth the living.

Jack and Evelyn had gone by the time this thought became clear out of the chaos that thronged her mind. She went into the house and crept up the back stairs to her room, feeling strangely old and tired. She lay down on her little white bed, and then, for the first time in her life, faintly.

How long she was unconscious she had no means of knowing. The sound of voices and laughter came floating up to her from the porch below. Jack's bass and Evelyn's clear soprano. A sudden resolve came to her, and

going to the closet, she took out her prettiest white dress, with pink ribbons that were so becoming to her, coiled her soft hair, and then, when dressed, surveyed herself in the glass. Great eyes with dark circles around them, a pinched white face drawn with sorrow, pale lips—that would never do. So, helping herself freely to Evelyn's cosmetics, she deliberately "made up" her face until the traces of trouble disappeared. She was not and never could be a brilliant beauty like her rival, but there was something infinitely more attractive in her face, and she had never looked lovelier than to-night. She went down-stairs with a step like a queen, or rather, as a queen should step, to laugh and talk with careless gaiety, as if she were heart-free and happy. But when Jack and Evelyn had left the room, and she had gone to Aunt Helen, the reaction came, and she threw herself down by the bed, sobbing:

"Oh, auntie, auntie! My heart is broken! I wish I was dead!"

The sweet, pale face on the pillow grew very pitying as the whole sad little story came out by degrees.

"My dear," she said at last, when Dorothy had finished and knelt with her face hidden in the bedclothes, "I know how to sympathize with you, for I have suffered just as you are suffering now."

"You, Aunt Helen!" Dorothy said, lifting her face in amazement.

"Yes, dear, I, and it may help you, perhaps, if I tell you my story and how I learned to bear it. When I was your age I was engaged, in fact, preparing to be married very soon, and it does not seem as if two people could have loved each other more than we did. But when this sickness came, which has left me as you see, and I knew that I must be a hopeless invalid, it seemed right for me to give him up, for I could not burden him, poor as he was, with a helpless wife. In my mind no one has a right to marry who is not able to bear the burdens and fulfill the duties of wedded life. He would hardly be reconciled to the thought, but at last he admitted the wisdom of my decision and we parted."

"Did he ever marry?" asked Dorothy.

"Yes—he married," with evident hesitation, "years after, my younger sister."

"My father!" was the girl's exclamation.

"Oh, Aunt Helen!"

"Yes, dear," was the quiet reply. "Now you know one reason why you are so dear to me. I would gladly have saved you this sorrow, but since neither of us could prevent it, I want to help you to make your life nobler by its means, and not let it be spoiled. There was a long time after my trouble when I expected and hoped to die, but when God in his wisdom gave back my life, I tried to make it one worthy the giver. Dear Dorothy," she continued, stroking the soft hair with one slender hand, "think what glorious opportunities you have! With youth, health and beauty, money and brains, all consecrated to the right, what can you not do? There is work for you somewhere, little girl. You are fit for something more than a society woman like Evelyn. Let your sorrow soften your heart to the sorrows and wrongs of others. Many have suffered things of which you do not even dream. Can you not be brave as well as they?"

There was a light of stern resolve in the girl's face as she went away that hinted of greater possibilities than she had yet realized.

Evelyn's engagement was soon announced, and the happy pair flitted to Newport for the rest of the summer, and went out of Dorothy's life at the same time. But she lingered on at Dexter with Aunt Helen, even after her family had returned to their city home, and were urging her to come there and begin her social career, as her older sister was now disposed of.

In the latter part of September Aunt Helen fell dangerously ill, and then it was that Dorothy found her work. The physician said he had never seen such a nurse, so clever, quiet and helpful. She stayed until the patient eyes of that white saint had closed forever, and then went to her city home, not to take her place among the "four hundred," a society doll, but to enter one of the city hospitals.

What her life will be it is too soon to tell yet, but it is now a poem—nay, more, a song of praise. Wherever there is sorrow or suffering, there will be found her clear brain, sympathizing heart, helpful hand and ready purse. Her life is so full and busy that she has no time to think of personal loss or gain. She has learned the great lesson of self-forgetfulness.—Waverly.

Agricultural chemists estimate the nutriment of 100 pounds of cotton-seed meal as equal to 318 pounds of corn, or to 767 pounds of wheat bran.

For Rheumatism

sciatica,
rheumatic gout,
neuralgia, dropsy, and
white swelling,
use

Ayer's Sarsaparilla
Cures others, will cure you

VARIOUS HELLS.

The general conception of hell—a conception primarily based on curiosity and fear—has been elaborated with marvelous ingenuity, says the *Nineteenth Century*. For instance, the Hindu hells, or narakas, are 136. The walls of the principal of these are over 100 miles in thickness, and their shrine of fire is so fierce that they burst the eyes of those who look at them even from the distance of 400 leagues. Yama, the Greek Pluto, the Christian Satan, is 240 miles high. The hairs of his body are like palm-trees. He punishes the damned by putting them in beds of boiling oil, sawing their bodies in two, pouring molten lead into their ears, pulling out their toe-nails and tongues, and a vast number of other varieties of torture. The mind, says Goldsmith with much truth, is ever ingenious in making its own distress. The general conception of hell has for many a fascinating horror, like that of a modern murder and the subsequent hanging which brings so rapturous a relish to our hot rolls at breakfast. It is an early sample of that remarkable human peculiarity which seems to delight in pain—that morbid tendency to self-torture which, not content with the ills of the present, look forward with quivering horror to other worse ills in the future. And the future beyond experience, if not beyond reason, offers an ample field to the fancy of the Heautontimorumenos. The unseen and the unknown have ever presented an attractive arena for the gymnastics of the imagination. But as the bee and the spider suck, we are told, honey and poison from the same flower, so we may extract pain or pleasure from our something beyond the grave. Generally we prefer to extract pain. The Kaffirs, with only thirteen paradises, have more than double that number of hells. The primitive Christians, says the sarcastic Gibbon, were animated neither by the love of pleasure nor by the love of action. They were alike careless of procuring private happiness to the individual or any public benefit to the world. "But," he concludes, "it was not in this world that the primitive Christians were desirous of making themselves either agreeable or useful." This passage, by the way, in an edition by Dean Milman, is enviously varied by the omission of the word "not." But Gibbon is perhaps a little hard on the primitive Christians. At all events their hell is probably both as agreeable and as useful as that of other creeds. Though, indeed, it shows less variety of fancy than that of the Hindus, it yet runs a very close race in the arena of agony with that of the Muslims, wherein the lightest punishment is to be shod with shoes of fire, the heat of which causes the skull of the unlucky wight who wears them to boil like a caldron.

NATURE'S MAKE OF "BEESWAX."

At the mouth of Nehalem river, on the coast of Oregon, a very queer substance is found. It has the appearance of a mineral at first sight, but on close inspection and under practical test it appears to be pure beeswax. It has all the useful properties of beeswax, and it is sold in Astoria at the regular market price of beeswax. It is washed ashore at high tide in quantities ranging from a lump the size of a walnut to a chunk weighing one hundred and fifty pounds. It is also found on shore, in black soil where trees are growing, at considerable elevations above the water.

A piece of this strange substance submitted to expert examination in New York is declared to be what is known as mineral wax. This substance has for years been known to exist in the lignite beds of the North-west. The quantities found on the coast of Oregon would seem to indicate the existence of a tertiary lignite bed in the neighborhood. It belongs to the hydro-carbon series, allied to the retinites and ambers—fossil remains of resinous trees of the tertiary age.—*Detroit Free Press*.

FREIGHTS AND FARMERS.

In a book recently published, Profs. Jenks and Ely present very elaborate and careful estimates of the cost of hauling freight in wagons on country roads. The general result of these estimates is presented in the brief but pregnant statement that at present the average cost of hauling 100 bushels of grain one mile is sixty cents. In other words, sixty cents is the cost of hauling three tons one mile. If there is no mistake in the estimate, it is something for the farmer to think about.

The average cost of hauling 100 bushels of wheat one mile by rail is said to be one third of a cent. From these statements taken together it appears that it costs 180 times as much to haul a given quantity of wheat from the farm to the railway station as it does to haul it the same distance by rail. To state it in another way, it costs as much to haul a crop of wheat a distance of ten miles from the farm to the station as it does to haul the same crop 1,800 miles from the station to market. The average distance from the farm to the station may not be ten miles. Suppose it to be half that distance, or five miles. It is then to be said that the average haul by rail to market is not 1,800 miles but less than half that distance. The conclusion remains that it costs fully as much to haul the crop to the station as it does to haul it from the station to the market.

The lesson which the farmer has to learn from all this is obvious. His worst enemy, so far as transportation is concerned, is not the

railroad, but the wagon road. And what he most needs to do is not to make war against the railroad companies, but to set about the business of cheapening transportation from the farm to the railway. It is right and proper, of course, to resist extortion where it is practiced by railway and elevator companies, but the farmer should not permit himself to become so much absorbed in that business as to neglect the other business, where there is an incomparably more promising field for economy.

A bushel of wheat is hauled by rail 1,500 miles for five cents. That is pretty cheap, and the farmer cannot expect much cheaper railway service very soon. It costs him five cents to haul the bushel about eight miles by wagon. If the cost of the wagon haul were reduced to one cent per bushel it would still be thirty-six times the cost of the haul by rail for the same distance, and the farmer would be ahead four cents a bushel, or about \$21 on the average crop of wheat harvested from forty acres of land. Here is the place for economy.—*Chicago Times*.

INDIAN LACE MAKERS.

Some beautiful pieces of hand-made lace attracted much attention at a meeting of a branch of the woman's auxiliary to the board of missions, held in the new parish house of the Church of Zion and St. Timothy yesterday afternoon. The lace was the handiwork of illiterate Indian women on the Sioux reservation. Most of it was as fine as the costly imported Honiton and point laces. It was displayed by Miss Sibyl Carter, who has devoted several years to missionary work in various parts of the world.

Miss Carter told her audience of nearly one hundred women that she learned to make lace in Japan sometime ago, and when brought into contact with the Indians on the Sioux reservation a few years later, she taught the art to some of the Indian women. Much to her surprise, they proved to be very apt scholars, and some of them became very skillful. They liked the work, and it paid them very well. The pieces exhibited were tidies and table-mats of exquisite patterns. Miss Carter thought that this particular industry ought to be encouraged and developed among the Indian women in the far West.

So much interest did the women who composed the meeting take in the matter that they determined to raise an amount of money sufficient to send a competent teacher out to the Indian women—a teacher capable not only of instructing them in the art of lace-making, but in other industrial pursuits as well.

PROFIT IN SLEEPING-CARS.

An operating official who knows about sleeping-cars, their cost and profit, remarked:

"Sleeping-cars pay big money, and when one knows the cost of operating them it is no wonder. A new car costs, good, strong and modern, anyway from \$8,000 to \$10,000, although you hear of them worth twice that sum. However, these costly cars don't get outside the shops. Well, the railroad companies pay three cents a mile for the privilege of hauling them, and the car will average three hundred miles in twenty-four hours the year around, or \$9 a day earnings. Say it earns \$3,000 a year—a low estimate—it will pay for itself in three years. Now, a ten-section car has twenty berths, selling local at \$2 a berth, making the earning capacity per night \$40, not counting the day earnings. Of course, sleepers don't carry full loads every night, but if they did not average ten passengers a day, we would not haul them on our road. Now, we pay for ice, water and fuel, and insure the cars; that is, we repair them when wrecked or injured. The sleeping-car company pays a porter \$25 a month at the most, a conductor \$90, and has to furnish the linen and soap. It is not difficult to see how the sleeping-car companies pay dividends."

THE PRODIGAL DAUGHTER.

The minister had preached an excellent sermon on a text taken from the parable of the "Prodigal Son," and everybody at the church door had praised the sermon. Over-taking a well-known lady of his congregation on the way home, the minister thought that she would certainly burn a little incense in his honor. He talked about the weather at first; then he paused to allow his companion to turn the conversation in his direction. But she said nothing. So he broke the ice with:

"And how did my sermon please you?"

"Oh, it was very good, no doubt, from a man's standpoint. The prodigal son is always returning, and the fattened calf is continually being killed. But I think it is time that something was said and done for the prodigal daughter. If a girl falls into evil company and squanders her substance in riotous living, there is no prospect of a welcome and forgiveness if she returns home. She is condemned without mercy by her own sex, and woe betide her if she leans for support upon the other. The next time you want a topic for a stirring sermon, think of the hopeless fate of the prodigal daughter."—*Woman's Chronicle*.

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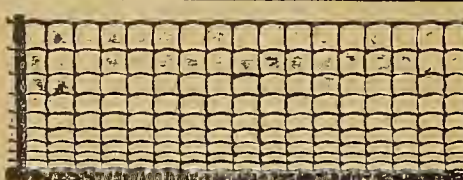
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Our Household.

THE TAPESTRY WEAVERS.

Let us take to our hearts a lesson—no lesson can braver be—
From the ways of the tapestry weavers on the other side of the sea.
Above their heads the pattern hangs; they study it with care;
The while their fingers deftly work, their eyes are fastened there.

They tell this curious thing, besides, of the patient, plodding weaver:
He works on the wrong side evermore, but works for the right side ever.
It's only when the weaving stops, and the web is loosened and turned,
That he sees his own handiwork—that his marvelous skill is learned.

Ah! the sight of its delicate beauty, how it pays him for all his cost;
No rarer, daintier work than his was ever done by frost.
Then the master bringeth him golden hire, and giveth him praise as well,
And how happy the heart of the weaver is, no tongue but his own can tell.

The years of man are the tooms of God, let down from the place of the sun.
Wherein we are weaving alway, till the mystic web is done—
Weaving blindly, but weaving surely, each for himself his fate.
We may not see how the right side looks; we can only weave and wait.

But looking over the pattern, no weaver need have fear,
Only let him look clear into heaven—the perfect pattern is there.
If he keeps the face of our Savior forever and always in sight,
His toil shall be sweeter than honey, his weaving is sure to be right.

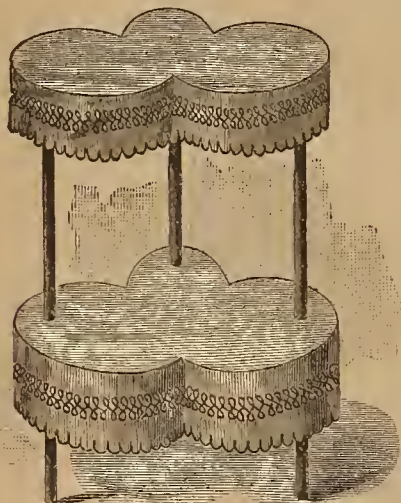
And when his task is ended, and the web is turned and strown,
He shall hear the voice of the Master. It shall say unto him, "Well done!"
And the white-winged angels of heaven, to bear him thence, shall come down;
And God for his wages shall give him, not coin, but a golden crown.

HOUSEHOLD CONVENIENCES.

So many comforts and conveniences enter into a complete home that one may continue collecting, improvising for a lifetime, and still find wants unprovided for. Having in a recent article mentioned the advantages of a well-equipped workshop to every farm, I now desire to call attention to some of the conveniences which may be provided at little cost by the man or boy who is handy with tools.

One feels a certain pride in those things which are the outgrowth of his own mind and the creation of his own hands. Moreover, the benefit of making useful articles is not all in the article itself, but much is in the practice thus acquired. Especially is this true in the case of boys, who, by constant practice, may eventually acquire expertness in a given line. It is in hope of encouraging boys in the use of tools that this topic has been selected.

In most homes are found collections of house plants; they should be found in all homes. These are frequently kept in the windows or on unsightly boxes. The boys will be delighted to provide shelves for them by fixing brackets to the window-facing. The brackets should be far enough apart to admit of the blinds being drawn down between them, and the shelf should not be placed nearer than a half inch to the facing for the same reason. For



HOME-MADE WORK-STAND.

heavier plants a neat bench may be made, just the height of the window-sill.

Every housewife will find use for a handy clothes-rack, if the space occupied is not too great. Next to those small but

convenient racks which are fixed to the wall, less space will be required for a rack consisting of an upright post two inches square and six feet high, with three sets of arms, each two feet long. The arms are fastened to the post so that the end extends through far enough to make a peg on the other side.

Every lady desires a nice work-stand, and if she will lend a hand, the boys will soon make one from three broom-sticks and two boards. The boards should be twenty-four inches wide, or two twelve-inch boards may be joined. Cut in a three-leaf-clover or any other triangular design. Cut the legs twenty-eight inches. Let the lower board be about ten inches from the floor. Cover legs with gilt paper, or stain walnut or mahogany. Cover the boards with ladies' cloth, underlaid with cotton batting. Drape with lace or embroidered cloth, and fasten on with ornamental tacks.

Who cannot find a place and a use for a what-not in an average house? They are usually made to fit in a corner, and are neat receptacles for pictures, cards and toys. I have recently made one of another design, to be used as a cabinet for the reception of ores, shells, flints, coins and numerous other curiosities. It is thirty-six by forty-six inches and five inches deep, with six shelves. It is set at an angle of twenty-five degrees, the front being a frame hung on hinges, secured by a latch, and fitted with double-strength glass, thirty by forty. The inclination admits of using not only the shelves, but also the back of the cabinet for the display of such articles as may readily be mounted on cardboard.

While providing other conveniences, do not overlook a bookcase or shelves for the collection of books, without which the finest house is minus one of its best ornaments. Add to the collection as circumstances admit, and encourage the children to read and discuss the contents during the long winter evenings. They will find the reading habit easy to acquire if suitable books are at hand, and the information obtained will be beneficial throughout life. Isolated as farmers are, they should, of all men, be surrounded by the companionship of the best and brightest intellectual lights of the world, and in standard books they find what they require. J. L. S.

HOME TOPICS.

KITCHEN FLOORS.—No one can deny that an unpainted kitchen floor, scrubbed as white as it may be with soap, sand and hot water, is fair to see, but when we think of the work necessary to keep it in this immaculate condition it loses half its charm.

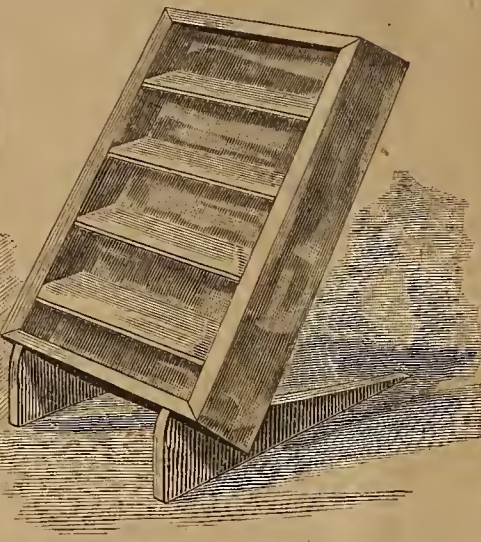
If everyone knew how well a painted kitchen floor looks and the saving of hard work it brings, it would be the rule instead of the exception.

A friend writes me: "I have just finished painting my kitchen floor, and you ought to see how nice it looks. I feel very proud of having done it myself, and will send you my recipe so you can give it to the thousands of FARM AND FIRESIDE readers. Get three quarts of linseed-oil, six pounds of yellow ochre and one fourth pound of glue. The day before you want to use it, put the glue into a quart of warm water to dissolve, and have the floor scrubbed so it will be clean and dry when you are ready to put the paint on. If possible, take a day for the painting when the men folks are away and there is no dinner to get. As soon as the work in the kitchen is done, in the morning, put the yellow ochre into an iron pot with one gallon of hot water and the dissolved glue. Stir all together and let it boil until well mixed and smooth. Put it on the floor while boiling hot and let it dry. Do not walk over the floor any more than necessary, and after supper put on a coat of hot linseed-oil. This will make the color darker and will be dry by morning.

All that is needed to keep this floor clean is an occasional mopping with warm (not hot) rain-water. Never use soap or a scrubbing-brush on a painted floor.

THE ORDER MANIA.—As lacking in comfort as a home is where disorder reigns, it is little worse than the one where order and neatness have become a mania. I know something of the feeling of a guest in such a home and can imagine

what it would be to be a member of the family. Not a paper or book must ever be left out of its own proper place. Not a thread, raveling or scrap of paper be dropped on the floor. Not a chair moved from its allotted position. An air of cold preciseness pervades the whole house, and you feel as if you were watched with argus eyes lest something should be disarranged. The husband and sons always came into the house, leaving their shoes in the woodshed, where they put on slippers, the children moved about the house with a sort of guilty air, as if they had no right there, and one little girl looked at me with astonishment when I told her



NEAT CABINET.

about the scrap-book my little girl made and the paper dolls she cut from cardboard and dressed in tissue-paper clothes. "Do your little girl cut dolls in the house?" she asked. "Don't the paper det on the floor?"

I thought I knew how to make a bed, but she said, "Don't make your bed; I always make it a particular way, and I just as soon do it." So it was about everything.

She was not strong and suffered with terrible headaches. Her husband was able and anxious to get some one to help with the work, but she would not consent. "No girl would do the work to suit me, I know, and I could not bear to have the house get dirty and out of order." So she wears her life out, not thinking that if she continues in this way, by and by some one must do her work, for she will be gone, her life a sacrifice to iron-clad order. MAIDA McL.

THE COUNTRY WOMAN.

The press and the public in general have long bestowed upon the "poor country woman" a deal of pity for what seems to them her forlorn condition, her isolated position, her ignorance and abjectness in general, until the mass of the people are forced to believe that her condition is akin to the state of the slave women in heathen lands. Much of the trouble arises from an erroneous comparison. While we safely smile at some of the false ideas advanced, we in turn sigh over some admitted facts. The city woman views her country sister from her own point of view; she sees her cut off from pleasant social surroundings, she sees her engaged in toil which seems fitted only to menials, she sees her devoid of all books and circles which might help her intellectually, and she naturally concludes that the country woman's lot is a hard one; but she makes a mistake when she puts her sister's affairs on the plane of her own possibilities, and reasons that other circumstances cannot bring happiness.

True, it would be unfair to assume that sympathy is unwarranted, for it is true, and "pity 'tis, 'tis true," that a class, which we are pleased to believe is in the minority, of such women is to be found in many country localities.

Utter misery, ignorance and many vices unknown to country women are sadly prevalent in city districts. Draw your own comparison, and if you are just, the poor, ignorant city woman will command the larger share of your pity. Happily, what is true of a class does not affect the masses in either case, yet it is poor comfort which teaches that one is better off because another is more miserable.

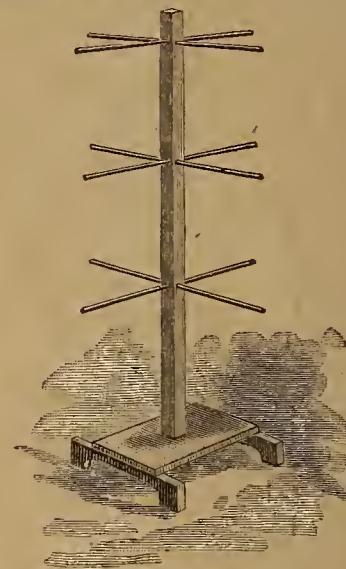
Turning to another class of country women, who acknowledge themselves neither poor nor ignorant, isn't it true that too many complaints arise from them?

This morning I have been looking over a popular journal devoted to woman and her interests. Among its columns now and then appeared letters from country women, and in the majority of these letters ran a thread of discontent, which in some cases amounted to almost a bitterness. Isn't this all wrong? A woman who has sense enough to compose a respectable letter ought to have pride enough to turn her mind into a more useful channel than writing letters for columns that parade her family troubles before the public. The influence of such letters is detrimental to her class.

Isn't it time that we country women are beginning to look for brighter and better things? Isn't it time we were trying to bring them about by trying to make them so? We must learn that we are an individual class of women governed by circumstances peculiar to our own way of living, and which bring results relative to the conditions in which we are placed. In order to be happy we must learn to depend upon what lies within our possible reach. We must learn that working day after day, week after week, without seeking a change, will not create an interest which can be healthful. Every woman, no matter what her circumstances are, can obtain variation if she will. A fifteen minutes' walk will take her away from her work to some new field of interest, if she will only educate herself to be interested in what surrounds her.

I have little sympathy for the woman who finds nothing in her neighbors to enjoy; she may not find that congeniality which she so much desires, but she must remember that we are all of one family, and if she cannot find some heart-throb akin to her own, who shall say wherein the fault lies?

Are we willing to be called an ignorant class of women? Are we willing to be satisfied with a knowledge of pots and pans and their uses? Is there anything to hinder us from knowing something outside our own little world? Nothing at all in this day of papers and books, yet we make a sad mistake if we depend entirely upon reading matter for our elevation. It is one of our privileges to be surrounded by bountiful nature, who will give if we will take from her. How many of us find friends and old acquaintances among the grasses, ferns, trees and wild flowers?



HANDY CLOTHES-RACK.

How many know the birds by their songs and looks? Surely, my sisters, this is a knowledge not to be despised, but sought for. Who says she has not the time? Find it, take it, steal it, and never fear the theft will make you a sinner.

Spend a day or two in a neighboring city, see all you can there, get all the ideas you can, put them into practice, if they are practical for you. Don't think you can't afford it; you are only paying a little of the debt you owe to yourself and family.

Don't grow envious, but cultivate a satisfied spirit for the possibilities within your reach. MARY D. SIBLEY.

SUMMER RECREATION AND TRAVEL.

As many are now thinking of spending some of the summer days away, perhaps a few suggestions may help some to have a journey who had not thought they could do so.

A place where one can have a thorough rest combined with pleasure and recreation is at Chantauqua, N. Y.

The place is easy of access, and it is a beautiful place to spend the summer. The climate is cool and very healthful.

Cottages can be rented at prices ranging from \$80 to \$300, a party often renting a cottage together sharing the expense, and boarding where they please. Good board can be had for \$4 and \$5 per week. In some cases room and board can be had for those prices in July, the prices being a little higher in August. It is very amusing to hear the different opinions people give for going there, but it is quite certain that you can get most anything you want there, study, pleasure or recreation.

I would not advise a sick person to go there unless they knew just where they were going to be, for it is not a pleasant place to be sick in.

Another outing has been planned by The Woman's Rest Tour Association, of Boston, Mass.

For \$250 one can spend three months very pleasantly in Europe. The route is carefully laid out, and pleasant stopping-places provided all along. Through this association ladies are provided with traveling companions and governesses who would like to travel that way. It really repays one to deny themselves something else and get a little travel in their lives, to give a change to their thoughts and broaden their views.

LOUISE LONG CHRISTIE.

BUTTONHOLES.

A long time back I can remember being given a firm, doubled piece of muslin on which to learn how to make buttonholes.

At first they were fearfully and wonderfully made, being likened to "burnt holes in blankets," "pig's sore eyes" and many other annoying things by the older members of the family, but I persevered, and can now make buttonholes that I am not ashamed to see on the family garments.

It isn't a bit more difficult to learn how to do them nicely than it is, to sew up an ordinary seam—but you must learn how first.

Tools are an absolute necessity. You would not foolishly try to dig in the garden with a penknife? Well, then, why try to make buttonholes without scissors? "Cut them with a knife!"—as some one advises, double the cloth and use a pair of shears, as I have seen women do. Well, they will look just like one or the other of those similes that I spoke of in the beginning if you do.

For muslin, calico and gingham use No. 40 thread.

First plan how many you mean to have, then take your measuring tape and calculate the spaces.

Make one just below the neckband, and one the width of the button from the bottom, then plan the ones between.

Take a needleful of white thread to mark them, run two or three stitches across the place you want to cut, then go on to the next one, making it look this way. Then cut them on the thread. I do not overcast them unless they are on ravelly goods.

I begin at the side away from the edge of the waist, being careful to make them by a thread of the goods; at the side where the button pulls to, I make a bar as I come around, to stay it.

The only way to do them nicely is to make up your mind to learn how, and keep at it till you do, just as you would any kind of fancy work.

A woman who knows how to patch and darn neatly, and make nice buttonholes, will keep her family looking nice upon much less than one who knows nothing of these things. CHRISTIE IRVING.

Every subscriber of the FARM AND FIRESIDE is entitled to a copy of our new, enlarged and illustrated book, "Successful Home Dyeing," the best and most practical book ever published.

Explicit directions are given for coloring over all kinds and colors of goods, with the 45 different Diamond Dyes, making over 100 named colors and 300 shades, warranted fast to light and washing.

A handsome birthday card for the baby will also be sent to any mother giving baby's name.

Every person who wants to know how to make over old garments, to color yarn, carpets, rugs, feathers, or any thing that can be colored, needs this book. Send at once to publishers, Wells, Richardson & Co., Burlington, Vt.

HOME TREATMENT FOR CATARRH.

From my own and others' experience I find catarrh can be cured at home.

Take borax the size of a pea, half a teaspoonful of sugar, dissolved in four table-spoonfuls of warm water; snuff this into the nostrils several times during the day.

Crushed cubeb berries smoked in a clay pipe, taking the smoke through the nostrils, is also used with good effect by some.

Another remedy: Put into a half pint bottle of clear rain-water as much chlorate of potash as it will dissolve; use this through the nostrils, diluted with warm water.

One suffering from catarrh should wear cotton in the nose when out in the extreme cold or in much dust.

Can some one furnish the words to the song, "I Really Can't Keep Still?"

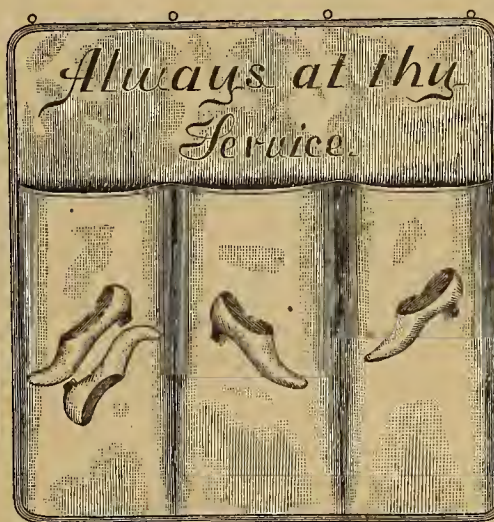
Kingman, Arizona. MRS. J. S. C.

SHOE-BAG.

The size of this article depends upon the place it is to occupy.

Use blue denim, bound with scarlet braid, also making the lettering of scarlet to match. Four good-sized brass rings, also covered with scarlet in single crochet, must be added to hang it.

On each pocket paint a slipper in oils, either in white or in the three colors,



scarlet, white and black, or all of them in gold.

To do this lay the groundwork in, in white first, and let it dry, then touch up with the gold.

If you cannot paint, they are quite pretty done in outline in coarse, white Bargaren thread. It is a great convenience to have one of these in every bedroom, as shoes are badly worn by being carelessly thrown about. One's best slippers should always be wrapped in soft paper and carefully put away in a drawer.

FLOWERS.

House-cleaning clouds hang heavy over the heads of many of us yet; and we think it will not do to stop for anything until that horrid job is completed.

Wrong for once, sister mine; just give a day or two to flower work when the proper time comes, house cleaned or not. Beds must be prepared, and the seeds in good season be planted, or the bloom for the summer be so late that Jack Frost nips them before half their beauty is over.

A change of work will do us good, especially when the change is to the open air and bright sunshine.

Interest the boys in the flower garden and get them to help you. Give them a bed or two of their own, and some nice plants to put in them. The boy who can be educated to love flowers and music will never hang around the "corner grocery" or spend his money in the billiard-room. And the best way to educate him to love flowers is to have them at home, for the mother to love them and care for them; but not to such an excess that the flower culture becomes a burden instead of a pleasure. A bed of pansies is a joy forever, and so easy of cultivation. Give an eastern or northern exposure, good, rich dirt and plenty of water, and many little "faces" will greet you every morning. If you have not started seeds in the house or hotbed in March, it were better to buy some plants; as seeds sown in April or May out of doors will not be ready to bloom until late in the summer. Verbenas will often self-sow and come up. The bed should be carefully forked over, and some well-rotted manure mixed in before the seeds begin to start. The ground gets so hard by lying all winter that the little verbenas have a hard struggle

to make a start if the bed does not have a little attention, and it must not be delayed too long, else the plants will be started, and digging them over will kill them.

Some of the Japan and Chinese pinks are as large as carnations, and after a bed of them gets started it will last for years with a little care.

Give the balsams a chance. How lovely they are! Some of them as double as little roses. Plant in May, and they will grow so rapidly after they come up. Ageratum grows easily, and is so pretty. Mignonette and sweet alyssum can sing their own praises in perfuming every breeze that blows over their heads. A few bulbs of gladioli and a tuberose or two will add a great charm to the flower garden, and are not very expensive.

A trellis of sweet-peas is almost indispensable. They ought to be sown as early as possible.

Why don't the sisters write more about their flowers and give us their experience? GYPSY.

VIOLETS.

The fragrant, purple-petaled little blossom which ladies affect so generally at this season of the year is the imperial flower of France, and was the favorite of the two beautiful women who graced the throne in the days of the empire. The ill-fated Empress Josephine claimed them as her own, and always had them about her. In the hours of her wretchedness at Malmaison her chief diversion was the culture of the flowers she loved, and the sweet-breathed little blossoms now surround her tomb.

Those who remember the reign of the beautiful Empress Eugenie will recall the great ovation of violets on November 15th. Thousands of bunches were thrown through the railing of the Tuilleries and piled in enormous pyramids, reaching to the ceiling. The doorways and easements were wreathed with them, and the balcony from which the beautiful woman greeted her subjects was banked and buried in a wealth of purple bloom.

Napoleon, too, cultivated them in his solitude at St. Helena, and they covered his coffin when it was borne to France.

The duchy of Parma is the finest violet-growing country in the world, and great fields of them stretch away beneath the warm southern sun, the property of perfumers. They are seen in greatest wealth and profusion in Paris, but the London men and women of fashion do not consider themselves correctly dressed at present without a bunch of Neapolitans. New York ladies of means are rarely seen without a bunch of them appearing on the corsage, in the bonnet, or fastened to the muff of matinee, reception or street costumes, and even dinner decorations at this season of the year are of violets scattered over soft silk or muslin of *eau de Nil*, beneath candles shaded softly with violet silk.

SPANISH PICKLE.

[As so many recipes came in, in response to the inquiry for Spanish pickle, I have selected the one I thought was the best from the number.—Ed.]

Peel and cut into lengthwise pieces, two inches long and the size of your finger, one dozen of cucumbers, and lay in salt water till ready for them. Chop fine two heads of cabbage, one peck of green tomatoes and a half dozen small onions. Sprinkle with salt in proportion of a half pint to a peck, let stand over night. Then squeeze out of the brine as dry as possible, place in a kettle with the following spices:

¼ pound Coleman's mustard,
1 ounce white mustard seed,
1 ounce black mustard seed,
1 ounce celery seed,
1 ounce turmeric,
1½ pounds brown sugar.

And vinegar enough to cover well.

Stir thoroughly while it is heating; when it is well scalded put it into bottles and make air-tight.

HINTS.

Dear sister readers of the FARM AND FIRESIDE, I have been a constant reader of the FARM AND FIRESIDE for the last nine years, and feel it is becoming a necessity, as well as a family friend. I have a large book which I made by cutting out all the useful information from my old papers, and I find I am well repaid for the trouble.

I now have every different subject so arranged that I can find just what I want very easily.

I want to tell you some uses for empty spools: For closets, try putting a spool on the nails, and then drive it in the wall. This will prevent the nail from breaking down even when quite heavy things are hung on them. They are nice to use on a screen door when the good man has forgotten to get the knob you asked him to get in town. We all cannot have many conveniences that we would like, so these makeshifts may suggest to others a way to get along till better days arrive. After all, it is quite a knack to know how to make something else do in place of the right thing. SISTER SALLY.

SWEET-PEAS.

Every year we see many articles about this lovely flower and its culture, and every year many people ask, "When shall I sow the seed?" or "Is it too late or too early?" etc.

So I suppose every year we must remind the forgetful ones and the beginners that sweet-peas must be sown early—real early—sometimes in March, if the ground gets thawed out so that a good seed-bed can be prepared. Prepare one of good, rich garden soil, using manure that has been thoroughly rotted. Sow the peas in trenches two or three inches deep, and string them to some support as soon as possible after the appearance of the vines before they get tangled.

Keep the flowers picked off closely if you wish plenty of blossoms. Sow one or two plantings if you wish to have flowers all summer, and when the first ones are gone, the next planting will be coming into bloom. GYPSY.

REST.

How differently men and women indulge themselves in what is called a resting spell! "I guess I'll sit down and mend these stockings, and rest awhile," says the wife, but her husband throws himself upon the easy lounge, or sits back in his arm-chair, with hands at rest and feet placed horizontally upon another chair. The result is, that his whole body gains full benefit of the half hour he allows himself from work, and the wife only receives that indirect help which comes from change of occupation.

A physician would tell her that taking even ten minutes' rest in a horizontal position, as a change from sitting or standing at work, would prove more beneficial to her than any of her makeshifts at resting. Busy women have a habit of keeping on their feet just as long as they can, in spite of backaches and warning pains. As they grow older they see the folly of permitting such drafts upon their strength, and learn to take things easier, let what will happen. They say, "I used to think I must do thus and so, but I've grown wiser, and learned to slight things." The first years of housekeeping are truly the hardest, for untried and unfamiliar cares are almost daily thrust upon the mother and home-maker.—*Domestic Monthly*.

To FRESHEN OLD SILK.—The best way is to have it recolored at a reliable dyer's. Black silk can be freshened by sponging with water in which a black kid glove has been boiled, and pressing with a warm iron.

A rich and brilliant effect is obtained on walls intended to be decorated by mixing an equal quantity of marble dust with the lime used in making the plaster. This gives a softness of tint which cannot be obtained with ordinary plaster. In Italy it has long been the custom to give a final coating of marble dust to walls intended to be treated by the "wet process."

WRITE THE COLOR OF EYES, HAIR AND COMPLEXION on the back of a photograph or any small picture of any member of your family, send it to us and we will upon its receipt make for you of charge, a beautiful PASTEL or SEPIA PORTRAIT, showing the natural color of the eyes, hair and complexion. This picture is an artistic gem and must not be confounded with the common black crayon, air brush or machine-made pictures which you see in almost every grocery. This is not a scheme to swindle by forcing the purchase of a frame. You buy your frame where you please. What we wish to do is to introduce our Pastel and Sepia work and to accomplish this we give to the first person sending from a city, town or locality one of these beautiful pictures. We will give for the first five orders you send to us, after you have received your picture. We send but one picture to each locality on these terms. Send photo at once and be the lucky one. This offer holds good for 30 days only. We are entirely responsible and refer to any Express Company in Chicago.

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Our Household.

THE GIFT OF TRITEMIUS.

Tritemius of Herbiopolis, one day,
While kneeling at the far's foot to pray
Alone with God, as was his pious choice,
Heard from without a miserable voice,
A sound that seemed of all sad things to tell,
As a lost soul crying out of hell.

Thereat the Abbot paused, the chain whereby
His thoughts went upward broken by that cry,
And, looking from the casement, saw below
A wretched woman, with gray hair aflow,
And withered hands held up to him, who cried
For alms as one who might not be denied.

She cried, "For the dear love of him who
gave
His life for ours, my child from bondage save—
My beautiful, brave first born, chained with
slaves
In the Moor's galley, where the sun-smelt
waves
Lap the white walls of Tunis!" "What I can
I give," Tritemius said, "my prayers." "Oh,
man
Of God," she cried, for grief had made her bold,
"Mock me not thus; I ask not prayers, but
gold.
Words will not serve me; alms alone suffice;
Even while I speak, perchance my first-born
dies."

"Woman," Tritemius answered, "from our
door
None go unfed, hence we are always poor;
A single saldo is our only store.
Thou hast our prayers; what can we give thee
more?"

"Give me," she said, "the silver candlesticks
On either side of the great crucifix.
God well may spare them on his errands sped,
Or he can give you golden ones instead."

Then spoke Tritemius, "Even as thy word,
Woman, so be it! (Our most gracious Lord,
Who loveth mercy more than sacrifice,
Pardon me if a human soul I prize
Above the gifts upon this altar piled!)
Take what thou askest, and redeem thy child."

But his hand trembled as the holy alms
He placed within the beggar's eager palms;
And, as she vanished down the linden shade,
He bowed his head, and for forgiveness
prayed.

So the day passed, and when the twilight
came,
He woke to find the chapel all aflame,
And, dumb with grateful wonder, to behold
Upon the altar candlesticks of gold!

—John G. Whittier.

WHAT EVERY MAN OUGHT TO KNOW.

A writer in *Harper's Bazar* says: While
the things a woman should know are
many, those with which a man should be
familiar are legion. The courtesy which
should animate the bearing of a man
toward a woman is so rarely seen in its
full perfection that its possessor is usually
described as a "gentleman of the old
school," and his manners are commented
on for their rarity.

Yet the habits that mark the true gen-
tleman are not so difficult to acquire as
to account for the comparatively small
number who own them. Their neglect
arises usually from carelessness, or from
a selfishness which places personal ease
ahead of the comfort or gratification of
others, for selfishness lies at the root of
the best breeding. Selfishness it is which
hinders a man's taking the trouble to re-
member to stand aside and let a lady pre-
cede him in entering or leaving a room;
which keeps him in his seat while she is
standing, whether in a public conveyance
or in a private parlor. He does not re-
cognize the spring of his actions by this
name. His excuse is always ready: "I
never thought of it." "Why should she
not stand as well as I?" Or perhaps,
hardest to deal with, "What is the use of
bothering about such things?"

To begin with, let it be roundly stated
that no part of the toilet should ever be
performed in public.

All such operations as cleaning or cut-
ting the nails, picking the teeth, removing
shreds of dried skin from the face or
hands, pulling out stray hairs from the
beard or scalp, should be performed in the
privacy of one's own apartment, not on
the street, in the car or boat, or in the
drawing-room. Some men consider they
are quite justified in scraping and paring
their nails in the presence of their fam-
ilies, assembled at the breakfast table, if
they preface the action with a perfunctory
"Excuse me," or "By your leave." Others
do not take the trouble to apologize even
thus slightly. And without pessimism it
may be affirmed that only exceptionally
does one find a man who will not pick his
teeth after a meal, if not before guests or
in a public restaurant, at least in the pres-

ence of his family. There are still house-
holds in which it is considered quite a
touch of elegance to pass a glass of tooth-
picks as the final course of a meal.

Abstinence from the above-mentioned
"small vices," and from others of the
same school, may be termed the first step
in good breeding. Such avoidance is
among the things a man ought to know
and to practice. But there are other ob-
servances needed to give grace and finish
to a man's demeanor. One of them is the
prompt removal of the hat, not only when
meeting an acquaintance on the street or
on coming into the house, but at other times
—in a horse-car, when tendering a seat to
a lady, and when she acknowledges the
kindness by a bow or word, in an elevator
or a hotel corridor when a woman is
present, and when kissing a woman, be
she only one's wife, sister or daughter.

There are other things which every man
ought to know—trifles, perhaps, but of
consequence in making or marring the
ease of others. Reference has already
been made to the graceful custom of
rising when a lady enters the room, and
remaining standing until she is seated; of
opening the door for a lady, and then
stepping aside while she enters or leaves
the room.

Among the small but unpleasant man-
nerisms which vex the housewife's soul
is the custom some hosts have of urging
their guests to take a second supply by
the assurance, "There is plenty more
where this came from," or "There is a
great quantity here." Every housekeeper
resents this remark as an implication that
there has sometimes been a scarcity of
supplies.

Do all these items seem such trifles as to
be unworthy of notice? Yet they are
powerful agencies in forwarding or de-
stroying the happiness of a man's home,
of the women therein, and of everyone
else with whom he is thrown into contact.
Even if the "big brother, Man," does not
clearly see the necessity, for his own sake,
of yielding courtesy, may he not, as a
concession to feminine weakness, make a
slight sacrifice of his personal inclina-
tions?

HOW TO USE SOAP-BARK.

There are very few people who under-
stand how to use soap-bark. It is the
very best cleaning material in use. Noth-
ing else cleans a black silk or black
woolen dress so satisfactorily. Five cents'
worth will clean an entire dress. It may
be purchased at any druggist's in the city
or country, being commonly used by all
tailors in cleaning men's clothes. It may
be used to clean almost any dark cloth,
but it possesses color enough in itself to
be liable to stain a delicate color.

To prepare soap-bark for cleaning, pour
about a quart of boiling water over five
cents' worth of the bark. Let it boil
gently for two hours, and at the end of
this time strain it through a piece of
cheese-cloth. Put the liquor in a clean
pail. Have ready a smooth board of suit-
able size, and have the dress to be cleaned
all ready, ripped, shaken and free from
dust. Lay each piece of cloth one after
another on the board, and sponge it
thoroughly on both sides, rubbing care-
fully any specially soiled spots. After all
the cloth is sponged, fill a large tub full of
cold water, and rinse each piece of the
goods up and down in it, one at a time, so
as to remove thoroughly the soap-bark.
Wring the pieces through the wringer,
lay them in a heavy, clean clothes-basket,
and when all are rinsed and wrung out,
begin pressing the first that were rolled
up. Iron them on the wrong side, if
woolen cloth, till they are dry, or nearly
so; then hang them on a clothes-horse to
air for at least twelve hours. The cloth
should hang in a place free from dust,
and when it is put away it will look like
new.

SUNSHINY HUSBANDS.

We read so much about the obligation
laid upon the wife to be a perpetual sun-
beam in the house, that a word to hus-
bands on this topic may not be amiss.
Husbands ought always to wear a smil-
ing and happy countenance. Should the
care of providing the raw material to
make a home weigh you down, never
mind, always go home with a smile.
Husbands have often lost the affection of
their wives by looking careworn. Be
careful about your personal appearance;
much depends upon that. Be sure that

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INCORPORATED 1889.

RECORDER,
W. THORNTON PARKER, M.D.,
SALEM, MASS.

OFFICE OF THE RECORDER.

SALEM, MASS., March 23, 1891.

When at Stuttgart, Germany, during the Winter 1881-82, I was suffering from a severe attack of Bronchitis, which seemed to threaten Pneumonia. I met, at the Hotel Marquardt, Commander Beardslee, of the United States Navy. In speaking of my sickness, he remarked: "Doctor, you can cure that chest trouble of yours by using an ALLCOCK'S POROUS PLASTER." "That may be true," I answered, "but where can I get the plaster?" "Anywhere in the civilized world, and surely here in Stuttgart. Whenever I have a cold, I always use one and find relief." I sent to the drug store for the plaster, and it did all that my friend had promised. Ever since then I have used it whenever suffering from a cold, and I have many times prescribed it for patients.

The ALLCOCK'S PLASTER is the best to be had, and has saved many from severe illness, and undoubtedly, if used promptly, will save many valuable lives. Whenever one has a severe cold he should put on an ALLCOCK'S PLASTER as soon as possible. It should be placed across the chest, the upper margin just below the neck; some hot beef tea, or milk, will aid in the treatment.

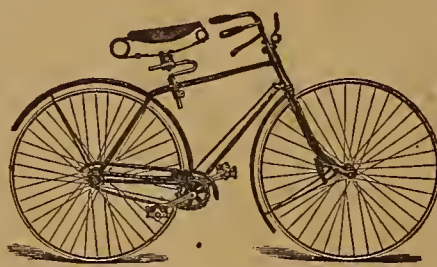
This is not a patent remedy in the objectionable sense of that term, but a standard preparation of value. The government supplies for the United States Army and Indian Hospital stores contain ALLCOCK'S PLASTERS, and the medical profession throughout the world is well aware of their reliability and excellence.

I shall always recommend it, not only to break up colds, but as useful in allaying pains in the chest and in the back. It is a preparation worthy of general confidence.

*For Thornton Parker M.D.
late a Surgeon
in Army*

COLUMBIA LIGHT ROADSTER SAFETY.

1892 PATTERN.



The manufacturers have kept the Columbias always in the front ranks of the highest grade machines, and the 1892 pattern is in every way worthy of the position. It combines all the features of strength, comfort, weight, appearance and simplicity. In selecting a wheel you are sure to be right in choosing the Columbia wheel.

The following description briefly enumerates the points of excellence in the wheel, and will be appreciated by every wheelman who has the pleasure of such a mount:

All steel forgings, no castings used. 30-inch rear, 32-inch front wheel, 1 1/4-inch Columbia cushion tires, Tangent spokes, 40 rear, 36 front, double butt-ended and adjustable at felloe. Columbia adjustable ball-bearings all around. Columbia spring forks. Columbia seamless steel tubular double diamond frame. Detachable rear sprocket wheel. Improved Elliott self-oiling chain. Detachable round Knocs cranks, 6 1/4 and 6 3/4 inch throw. Columbia double-grip ball pedals, 3 1/2 inches wide, 6 1/4-inch ball-bearing steering-head. Seamless steel tubular tapered and curved handle-bar, adjustable for height. Adjustable rear wheel brake. Adjustable saddle-rod. Kirkpatrick saddle. Detachable steel wire lantern bracket. Round step. Adjustable foot-rests. Guards to steering wheel and chain. Tool bag, with Columbia B. & S. monkey-wrench. Screw-driver and oil-can. Gear 53. Weight, 54 pounds. Finish, enamel with nickel tips and spokes. Any of the following variations in equipment may be had if desired: 1/2 and 3/4 inch solid tires with seamless steel hollow felloes. Continuous forks. 5 1/2 to 6 inch cranks. 3/4 or 4 inch ball pedals. Gear, 57 or 60.

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The wheel must be sent by express or freight, receiver to pay charges. Address

FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio.

your hair is smoothly arranged and your collar spotless before presenting yourself at the breakfast table. It is by attention to such little things that you may be able to retain the affection of your wife. Don't complain if you are sick. A complaining husband often drives a woman to seek more congenial society. If you have a toothache, smile. The wife may find it necessary to absent herself from home every evening and decorate herself with ribbons of various hues if you complain. Keep up with the times. Your wife, having the care of the education of the children, naturally reads more than you. Don't let her. After you have worked twelve or fourteen hours a day, devote the remainder to keeping your mind in good trim, so that your wife may not find a more congenial spirit elsewhere. Pay strict attention to these rules and your marriage will not be a failure.

HOUSEHOLD INVENTIONS.

Eighteen different kinds of folding beds were patented during the past year; a patent trap to catch vermin was evolved; six schemes were devised to hold bed-clothes on kickers; seven bed lounges were produced; seven invalid chairs and nineteen different ways of rolling up a shade were duly patented, and innumerable devices for hanging curtains, sweeping carpets, stretching carpets, cleaning carpets have been dumped into the patent office like coal through a cellar shoot.—*Philadelphia Upholsterer.*

A HOME-MADE CLEANING FLUID.

For the information of a correspondent, who wishes to know of some preparation for cleaning a carpet of grease spots, we give the following recipe for making a cleaning fluid, recommended by a correspondent of the *American Agriculturist*: Shave two ounces of white Castile soap into a pint of water, and set over the fire until it has dissolved; then add two more quarts of water, two ounces of ammonia and one ounce each of glycerine and ether. Let it cool, and cork up tightly in bottles. When you wish to use it shake up and put a teacupful into six quarts of water; sponge with a piece of flannel and rub dry with a clean piece. To clean a very dirty garment, with many grease spots,

use a cupful of the fluid to a quart of water, and sponge afterward with clean water. This is a most excellent washing mixture in the proportion of one part of the fluid to twelve parts of water, for woolen and flannel dresses.

This, the correspondent says, is cheaper and more satisfactory than the purchased cleansing fluids and pastes.

ABOUT WOMEN.

A woman has no right to have a disagreeable voice.

If you have nothing to be thankful for, be thankful that you can't always read your best friend's thoughts.

A single clasp on the cloak of Queen Elizabeth had set in it six sapphires, sixty pearls, eighteen rubies and four emeralds.

Lady Randolph Churchill is the only American woman who has been honored by the queen with the Order of the Crown of India.

Lady Aberdeen is taking a great interest in the world's fair. She wishes to have an exhibit of Irish industries established at the fair with a view of fostering them.

Liliuokalani, the name of the Hawaiian queen, who is said to be growing unpopular, means lily of the sky, and is pronounced as though written Lil-lee-woke-a-launy.

The lady managers of the world's fair brook no masculine interference whatever. No man is allowed to enter the building where they hold their sessions, and even the pages are young women.

An Italian duchess, the Duchess Bolognini, who has recently lost her husband and son, has sold her jewels for \$100,000 and given the proceeds to the children's department of the Milan hospital in memory of her son.

Mrs. Zerelda Wallace, the general's mother, is a quiet, motherly little woman, who dresses simply in black, with a white drapery drawn about her neck and fastened at her breast. Her hair is curly and snow white, for she is more than seventy.

HOME STUDY. SUCCESS IN BUSINESS depends largely upon one's training and knowledge of business affairs. If YOU wish to succeed take a thorough Business College course at **Home, by Mail.** Highly commended as a Practical, Convenient and Economical Plan of Study. Circulars and trial lesson free. BRYANT & STRATTON, 449 Main St., Buffalo, N. Y.

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Our Sunday Afternoon.

VAIN REGRETS.

Oh, heart of mine; we shouldn't
Worry so!
What we've missed of calm we couldn't
Have, you know!
What we've met of stormy pain,
And of sorrow's driving rain.
We can better meet again,
If it blow.
We have erred in that dark hour,
We have known,
When our tears fell with the shower;
All alone—
Were not shine and shower blent
As the gracious Master meant?
Let us temper our content
With his own.
For, we know, not every morrow
Can be said;
So, forgetting all the sorrow
We have had,
Let us fold away our fears,
And put by our foolish tears,
And through all the coming years
Just be glad.

—James Whitcomb Riley.

A HOME SCENE.

She sat limp and disconsolate in her little rocker. Her dreaded Nemesis was close upon her. She had said, "now I lay me," and had kissed the whole family "nightie" a half dozen times, and now there was nothing left in the world to do but to have her go to bed. A brilliant idea struck her—she would kiss the family the seventh time. She had to tiptoe to reach papa, but as this resulted in a sidewise kiss, not at all satisfactory to her ladyship, she climbed up on one round to get a better one; and then she had to get on his lap to hug him tight.

"You sweet old papa boy!"

Papa puts down his paper and looks rosy and smiling. Her arms are around his neck, and she looks straight into his eyes, and says, with many a nod:

"Papa, you rock me and let's play church."

Papa argues with her. She is too big to be rocked asleep. Nice little ladies go right to bed and don't say a word. This was no effect, so he strikes a compromise:

"Well, we'll play church a little while; then you tell me when you are sleepy and I'll put you to bed."

"An' sit by me an' hol' my han'?"

"Yes."

"All right. You sweet old papa!"

Another series of embraces and kisses, and they decide to begin service by singing "By and By."

Papa's voice was soft and low, but her voice rang out clear through one entire verse. She wavered through two lines of the next verse, but a yawn enveloped the third and papa's voice alone was heard.

She was quiet while he sang the fourth line, and when he insisted that she help sing the chorus she said sleepily:

"I'll listen and you sing."

But papa insisted, and with a quavering voice, far away from the key, she sang:

In the sweet by and by
We shall meet—

Her head went back softly on papa's shoulder and one little arm stole around his neck.

—on that beautiful shore,
In the sweet by and by,
We shall meet—

Her eyes had closed by this time, as if angels had gently kissed the lids. There was a pause between each word—papa stopped, but the little voice seemed to think it must finish:

On—that—beautiful—shore.

That was all. The white-robed mandarins of sleep had borne her away to that country from the shores of which it is only a step to that other "beautiful shore" of which the little maid sang so sweetly and so sleepily.—*St. Louis Republic.*

FRIENDSHIP.

Friendship is one of the greatest boons that life can have. As Bacon says, "it redoubleth joys and cutteth grief in halves." But where brotherhood is united with it it attains a still richer result; for then it has a world of memories and early associations in common—the mutual love of the same honored parents, the recollections of the same beloved home and of past scenes vividly impressed on the minds of both, in which no other friend, however dear, can possibly share.

ENVIRONMENT AND CHRISTIAN LIFE.

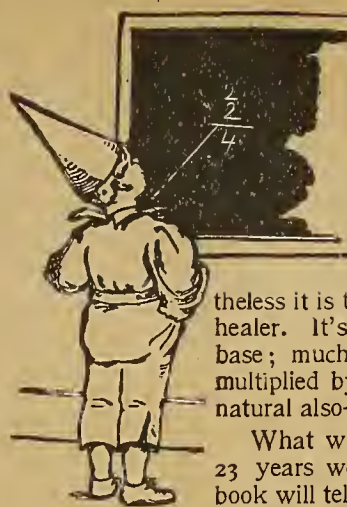
Scientists are gradually seceding from extreme statements of the influence of "environment" upon life, and in the realm of historical investigation the school of Buckle has lost ground within the last decade. Something more than circumstances is needed to account for the manifestations of life. Vital forces, though limited by environment, are not absolutely conditioned by it. Life constantly asserts itself against circumstances. In the domain of morals the career of Judas illustrates the impotence of mere surroundings to modify character. No man was more favorably placed for spiritual goodness and development than he. For years he lived under the personal influence of our Lord, heard his words, witnessed his miracles, beheld his character, and yet his inner temper remained unchanged. His real self did not respond to the revelation of the son of God. We leave to speculative theology the problems suggested by the fact that a human will could withstand such influences. The fact that Judas did not respond to them stands upon the face of the record. The influences even of grace must be appropriated by the personal soul before they become regulative of its life. We push theories of Christian nurture to an extreme when we suppose that the most favorable surroundings and the most careful teaching make the necessity of a personal decision for the son of God less urgent. Many of the prevailing schemes for lessening the evil of the world apparently take it for granted that improved souls result from an improved environment; that preaching the gospel is less urgent than shorter hours of work and larger pay; that prohibitory legislation is quite as important as moral efforts to suppress liquor drinking. Both life and circumstances require emphasis. They react upon each other. Better environment contributes to a better life, a better life contributes to a better environment. But of the two, life has the precedence. There is much hope that the street waif, gathered in some mission school, whose heart has responded to the son of God, will grow up into a strong and beautiful Christian character. There is no hope that the child surrounded by Christian influences, who yet resists sympathetically appropriating them, will live a Christian life by the force of circumstances.—*Boston Watchman (Baptist.)*

FASTIDIOUS SPEECH.

How many people are there who pronounce any proportion of their words correctly, not merely by reason of clipping and mousing, but by ignorance of good usage? We find them everywhere, and they lay the accent on the first instead of on the second syllable of acclimate, for example; they pronounce the second syllable of acoustics, coo, instead of cow; they do not put the accent on the last syllable of adept, as they should do; they leave the *u* sound out of buoy; they pronounce duke with the sound of *oo* instead of with the simple long *u*, emphasize the first instead of the second syllable of enervate, and sound the *t* in often. They are astonished to know that precedence has the accent on the second syllable, and placard on the last; the quay is called key; that sough is suf; that the *z* instead of the *s* sound is to be given in sacrifice, and the reverse in rise; that subtle and subtle are two different words; that the last syllable of tortoise is pronounced "tis" instead of "tus," that it should be used and not ust; and that it is not the "zoo," but the zoological gardens where one goes to see the chimpanzee, and not the chimpanzee. It is quite time, we think, when we hear one of these talkers, for some of the fancy work and fancy studies of the day to be dropped, and a little hard work on the dictionary put in their place.

THE DEMANDS.

The two greatest demands of the hour are the liberal giver and winner of souls. Given these in the individual church there will be occasions for spiritual rejoicing over pastors sustained, church improvements made and sinners saved. Multiply the number of those who devise liberal things for God and labor for souls until every congregation feels their activity, and what fresh life will be infused into Zion at large, how the gospel will be extended far and near, and what myriads will be won to Christ!—*Christian Advocate.*



It's Very Simple

Drs. Starkey & Palen's COMPOUND OXYGEN works no miracles, though it works miraculously. There is only one justification for our claim, and that is our experience. The human mind is closely linked to the visible. It requires an effort to realize that something that you cannot taste in your mouth, or put in your stomach is really a medicine. Nevertheless it is true that our COMPOUND OXYGEN is a marvelous healer. It's natural, too, after all. The air we breathe is the base; much more oxygen is added; then its effectiveness is multiplied by magnetism. That's the means. The method is natural also—nature's own. You breathe it.

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We do not know why Scott's Emulsion of cod-liver oil is so useful in those simple but varied conditions which you know as "having a cough." We cannot explain it: we only know the fact from experience.

It may be due to the combination of tonic effects of cod-liver oil and the hypophosphites; it may be partly due to the glycerine. There are many effects in medical practice the causes of which appear to be plain, but how those causes produce those effects we do not know at all.

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Your druggist keeps Scott's Emulsion of cod-liver oil—all druggists everywhere do. \$1.

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Burns, Wounds, Sprains, Rheumatism, Skin Diseases, Hemorrhoids, Sun Burns, Chilblains, Etc. Taken Internally, Will Cure Croup, Coughs, Colds, Sore Throat, Etc.

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| PURE VASELINE (2-oz. bottle)..... | 10 cts. | VASELINE SOAP, Unscented..... | 10 cts. |
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See New York World and Philadelphia Press, May 18 and 19, 1890; also Christian Observer and Medical Journal, April 9, 1890. The Christian Evangelist, May 30, 1890, says editorially: "The Kola Plant is a gift direct of God, to sufferers from Asthma, and His blessing will rest upon Stanley and associates, explorers of the Dark Continent. It is an unfailing cure for Asthma." Remember, No Pay Until Cured.

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REFERENCES:—Rev. T. DEWITT TALMAGE, D. D., and all Commercial Agencies.

Our Farm.

THE POULTRY YARD.

Conducted by P. H. Jacobs, Hammonton, New Jersey.

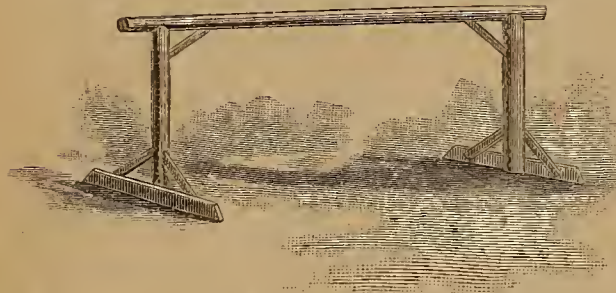
A ROUP REMEDY.

When a fowl breathes with difficulty, and acts like a child with the croup, it will be but a short time before it will suffocate. Carry the sick bird into a warm place, and sprinkle a pinch of chlorate of potash around the windpipe. Do not attempt to force anything down the throat, as it may cause the bird to strangle suddenly. A soft rag, tied on the end of a lead-pencil, dipped in a mixture of ten drops carbolic acid and a half gill of water, may be used for swabbing the throat before applying the potash.

MOVABLE ROOST AND NEST.

As the summer comes, lice will swarm on the roost and in the nests. It will be an advantage if the roost and nests can be carried outside and cleaned, which allows better work to be done on the walls. The illustration of a movable roost needs no explanation. It may be of any preferred length or height, but should be strong. The lower the roost-pole the better.

The nest-box may be one foot wide,



MOVABLE ROOST.

fifteen inches high and eighteen inches long. The boards, A A, are hinged, the front one remaining down all the time, and the rear one up, except for cleaning the nest, when both ends are open. Hooks and eyelets are shown at C C and D. A handle, B, is intended for carrying the box. By boring holes in the boards, A A, the nest may be used for setting hens, and may be entirely closed. The nest should be raised an inch off the ground. A narrow crosspiece is in front to prevent the hay from being dragged out.

BROILERS IN CHICAGO.

The latter part of the month of March found broilers selling in Chicago at \$6 per dozen, for weights between one and two pounds each. This is nearly the same as the New York prices, where they were 38 cents per pound. In Chicago chickens are sold by the dozen, and in New York they are sold singly.

LINSEED-MEAL BREAD.

If the flock is not too large, one of the best foods for laying hens is to take one bushel ground oats, one peck middlings, one peck bran, half bushel corn-meal and four quarts linseed-meal, the whole to be well mixed, and cooked as bread. If the flock is too large there will be more labor in baking the bread than can be well bestowed, but for a small flock fill a large pan full of the dough and put it in the oven after the evening meal is cooked, leaving the pan in the oven until morning, when it will be cooked sufficiently. Feed it by breaking off the quantity required, and crumbling it. It is almost a complete food for laying hens and growing chicks, and is wholesome.

DALMATIAN INSECT-POWDER.

Only fresh insect-powder is efficacious in ridding poultry of vermin. The cheap insect-powders are of no value whatever. The best are put up in air-tight canisters, and sold at 75 cents a pound. It is usually sold by all druggists, and the Dalmatian is considered the best.

GARDEN AND POULTRY.

While a hen and chicks may do considerable damage in a freshly-planted garden, by scratching the seeds out of the ground, it is doubtful if the hen is injurious after the plants are well up, for she will turn her attention to seeking insects. A hen carrying a brood is very industrious, and she and the chicks search every leaf, as well as look carefully over every square inch of ground.

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There are not many things that are as good, or equal in value to Gold, and VERY FEW that are BETTER than GOLD. It is, however, a known fact that there are thousands of owners of our world-renowned "Murray" Buggies and Harness for their value in gold, if they knew that they could not get another of the same kind. Our

MURRAY \$55.95 BUGGIES and \$5.95 HARNESS

are known the world over and are justly recognized as the BEST and CHEAPEST Vehicles and Harness on the market. We sell direct to the consumer at prices beyond competition and belong to neither the Buggy or Harness Pool or Trust.

Do you wish to purchase a Buggy or Harness this year? If so, and you want value received for your money and something BETTER than GOLD, there is but one make to buy and that is the celebrated "MURRAY."



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Write for our large Illustrated Catalogue, containing full description and prices of our "MURRAY" Vehicles and Harness. We will mail it to you FREE. Address all letters to

THE WILBER H. MURRAY MFG. CO., CINCINNATI, O.

MURRAY BUILDING.

Many Firms Make Big Claims

But we Prove Our Words by Deeds AND WILL WAGER

ONE THOUSAND DOLLARS with any Carriage or Harness Firm in the U. S., same to be given to any charitable institution by the loser, that we can show more honest and better testimonials for the "MURRAY" Buggies and Harness for the time our goods have been on the market, than any one Factory in the World.

CROSSING LEGHORNS.

The crossing of two breeds is something that calls for good judgment. In crossing there should be an object. If two breeds directly opposite to each other in characteristics are crossed, the result may be antagonism, and the produce possesses no good qualities at all. Such an active breed as the Leghorn will make a better subject for crossing when mated with the Game, as the produce will be active foragers, and hold the uniform color. It is well enough to cross with a large breed (the Partridge Cochins preferred); the females of the cross should be mated with some kind of Game the next year. The Black

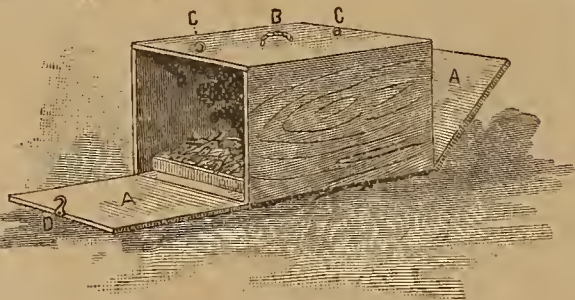
Spanish does not serve so well for crossing with Games as will the Brown Leghorns.

FEEDING RED PEPPERS.

Red pepper possesses but little virtue as an egg producer, and has no more effect on the generative organs of fowls than on human beings. It serves well as an occasional corrective of the bowels, when the fowls are sick from overfeeding, but a teaspoonful in the food of 100 hens is ample for all purposes.

CORRESPONDENCE.

AN EGG RECORD.—I saw in FARM AND FIRESIDE for March, 1892, Mrs. F. B.'s record of eggs, which she thinks is pretty good. Therefore, as I have been a subscriber to FARM AND FIRESIDE for a number of years, I thought that I would send you my record of eggs, and expenses of keeping the hens for one year, from January 3, 1891, to January 3, 1892. First I had nineteen hens and one rooster. They laid, during the year, 167 dozens eggs. The feed cost me \$10.43, and I got for the eggs \$49.01. The highest price was 22 cents, and the lowest 12½ cents per dozen, besides I had six of the above hens setting, and I raised 91 chicks. Two of the hens died. I fed whole corn the entire year, besides the scraps left over at



MOVABLE NEST.

meal time. The breed is brown and white Leghorn, the best laying chicken known. Dakota, Ill. A. N. B.

A FEW CHICKEN NOTES.—I will try to give my experience with chickens, not that it is anything phenomenal or wonderful, but it may serve to illustrate that farmers' wives have it in their power to earn an addition to their narrow income. In December, 1890, we moved from town to a farm. We purchased, at a sale, four dozen chickens at \$2 per dozen. They were a mixed lot, being part Black Spanish, some half-bred Brown Leghorns, and a few Plymouth Rocks. All were hens, and fine large birds, with the exception of five or six. A friend gave me four cocks. There was only a slight shelter, and we had nothing to make it better, so when the extreme cold weather came, all had their combs frozen, and six were so badly injured that four of them died within a week. The other two lived until spring, when they also died. There were about three bushels of smutty wheat left in the granary by the family who had lived here, and that, with one bushel of corn and potato peelings and table scraps, furnished their food. I saved all vegetable peelings and boiled them,

mashed them well, added table scraps (if I had them), also a tablespoonful of black pepper and one of sulphur. This I fed them three times a week. They of course foraged; but as the crops were a failure in 1890, they could not get very much. During the year 1891 I sold three hundred and sixty-five dozen eggs for forty-six dollars, the price ranging from twenty-two cents in January to eight cents in summer, and I raised one hundred and twenty-five chickens. We ate twenty-five from July until January, and sold six dollars and a half worth, at four and one half cents per pound. I bought one Wyandotte cock, at fifty cents, and also one setting of eggs, at fifty cents. I also bought three sacks of corn-meal for the young chicks.

The account would stand like this: Expenditure—4 dozen hens, \$8; 1 cock, .50; eggs, .50; 1 bushel corn, .50; 3 sacks meal, \$1.20; total, \$10.70. Income—365 dozen eggs, \$46.00; chickens, \$6.50; stock on hand, \$18; total, \$70.50. Profit, \$59.80. Not a bad showing for the time and labor. I have one hundred and two hens and six cocks. Nine dozen at same price we paid would be \$18.00, but we could sell them readily this winter at three dollars per dozen. Besides, we have all the eggs we wish to use, many days in summer using eighteen or twenty. I was not very successful in raising chickens, as I had two hundred and fifty hatched, but there were frequent cold rains, which chilled the little creatures so that many of them died; rats caught many more, and this winter fourteen were stolen. This year I hope to do better, as I can shelter them, and provide for their wants with less trouble. I have written this to encourage some woman who, like myself, has the care of a household, yet wishes to earn money, or its equivalent. I could not get the money, but exchanged for groceries and other necessities for a family. M. J. P. Jewell, Kan.

INQUIRIES ANSWERED.

Brooder Plans.—Mrs. J. R. C., writes: "Can you give me plans of a brooder for chicks?"

REPLY:—We have published quite a number of them. Your name was illegible, and you gave no state or post-office, or plans would have been mailed you.

Cropbound.—H. M. M., Denver, Col., writes: "What is best to do for cropbound, and what is the cause?"

REPLY:—It is caused by an obstruction of the passage leading from the crop to the gizzard, probably from swallowing long dried grass, a piece of rag, or such. Work the crop with the hand until soft, giving the fowl melted lard. If this does not relieve the fowl the crop must be opened and contents removed.

Poultry-house.—J. T., Cable, Ill., writes: "Please give plan of poultry-house for 2,000 hens."

REPLY:—As preferences differ, it is impossible to select a plan that satisfies all. By reference to our back numbers over fifty different plans will be found.

Turkeys.—A. S., Cornell, Ill., writes: "I have one gobbler and three hens. They roost on trees. The past week they do not appear to have any life, and do not come down from the trees until about nine o'clock. They have had all the corn they want to eat."

REPLY:—They are probably too much exposed to severe cold in the trees, and too chilled to reach the ground, except with difficulty, or may have had their feet injured with cold. Put them under shelter, and feed pounded fresh bone and a proportion of meat, thus varying the food.

Feather Beds.—L. J. M., writes: "Give a method of renovating feather beds."

REPLY:—If you have conveniences for so doing, put the feathers in a large box, loosely, and pass a current of hot air through them for ten minutes. If not, place them in a bag of mosquito netting and expose them to the air and sunlight, frequently stirring them for a day or two, avoiding dampness.

Roup.—M. K., Peoria, Ill., writes: "My fowls are first taken with diarrhoea, breath very offensive, and a rattling in the throat."

REPLY:—Add a teaspoonful of liquid carbolic acid to each quart of drinking water, should the appearance be of cholera. For roup (indicated by the foul odor and rattling in the throat), use a tablespoonful of chlorate of potash in each quart of the water.

Lameness.—J. B. W., Rochester, Pa., writes: "My chickens get lame in the legs. I have occasionally such cases."

REPLY:—It may be due to high roost, or to damp quarters, and if affecting only the hens, the male should be removed, as he may be at fault.

Canary-bird.—L. J. Z., Cottleville, Mo., writes: "What is the matter with my canary-bird? He does not sing any more; is from three to four years old, and otherwise well and hearty. He was moulted all winter."

REPLY:—He has probably not recovered fully from the effects of the moulting process. Examine also for lice.



EGGS

FOR HATCHING

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BEE-KEEPERS supplies of all kinds. Send for circulars. C. E. LUKENS, 19 N. 2nd St., Philadelphia, Pa.

Send for description of our \$55.00 Top Buggy. Superior quality and style guaranteed. Ohio Carriage Co., Cincinnati, O.

EGGS From first-class stock. Prices Away Down. Send three stamps for 40 page Catalogue, finest published, elegant colored plates. C. C. SHOEMAKER, Freeport, Ill.

D. A. MOUNT, Prince's Bay, N. Y., Breeder of White Turkeys, W. Guineas, Mammoth Pekin Ducks, P. Rocks, Lt. Brahmas, Ind. Games and W. Wyandottes. Cir. free, giving prices and prizes won.

BEST! From 10 most profitable varieties. PURE BRED POULTRY. EGGS! Money refunded on every 5th order received. \$2.00 per setting. FREE! Send for catalogue. S. W. Guthrie, Indiana, Pa.

EGGS & FOWLS FOR SALE From 50 Varieties. Largest Range in the West. My fowls won over 800 prizes at 7 State shows last fall. For full description send three one-cent stamps and get the finest illustrated catalogue out; size 8x11 inches, 32 pages. CHAS. GAMBERDINGER, COLUMBUS, O.

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Will do it. Thousands in successful operation. Simple, Precise and Self-Regulating. Lowest-priced first-class Hatchery made. Guaranteed to hatch a larger percentage of fertile eggs at less cost than any other. Send 6c. for Illus. Catalog. GEO. H. STAHL, Quincy, Ill.

RUBBER \$2 per 100 sq. ft. Anybody can lay it. Guaranteed water-tight. Write for Book Circular.

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COOPER'S SHEEP DIP.

Cures Scab. Kills ticks and lice. Improves both sheep and wool. \$2.00 packet makes 100 gallons. Order of F. S. BURCH, 178 Michigan St., Chicago.

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WILL CURE YOUR SORE NECK HORSE. ASK YOUR HARNESS MAKER FOR THEM.

FARMERS Saw and Grist Mill, 4 H. P. and larger. Catalogue free. DeLOACH MILL CO., Atlanta, Ga.

SMOKE YOUR MEAT WITH KRAUSERS LIQUID EXTRACT OF SMOKE. SEND FOR CIRCULAR. E. KRAUSER & BRO. MILTON, PA.

THE STANDARD OF THE WORLD. FRANK MILLER'S. FOR HOME AND STABLE USE. HARNESS DRESSING.

For Harness, Buggy Tops, Saddles, Fly Nets, Traveling Bags, Military Equipments, Etc. Gives a beautiful finish which will not peel or crack off, smut or creak by handling. Not a varnish. Used by the U. S. Army and is the standard among manufacturers and owners of fine harness in every quarter of the globe. SOLD BY ALL HARNESS MAKERS.

Milk PRESERVATIVE.

Milkmen, Creamerymen and Dairy-men can keep Milk and Cream fresh a week without using ice. Healthful, tasteless, odorless and inexpensive. SAMPLE, enough to make test, mailed for ten cents. The Preservative Mfg Co., 19 Cedar St., New York.

Our Miscellany.

TO THE WOMAN WHO TOILETH.

Place a spray in thy belt, or a rose on thy stand,
When thou settest thyself to a common-place seam;
Its beauty will brighten the work in thy hand,
Its fragrance will sweeten each dream.

When life's petty details most burdensome seem,
Take a book—it may give thee the solace thou'st sought—
And turn its leaves o'er till thou catchest the gleam
Of some gem from the deep mine of thought.

When the task thou performest is irksome and long,
Or thy brain is perplexed by doubt or a fear,
Fling open the window, and let in the song
God hath taught to the birds for thy cheer.

Oh, a branch of wild roses the barrenest lodge
Maketh fit for a throne, while the blossom-lug vine
Will turn to a bower the thorniest hedge;
So will beauty make stern life divine.

—The Home-Maker.

THE ant is said to have the biggest brain according to its size of any creature.

THE recoil of a rifle employing smokeless power is said to be not so great as with ordinary powder, while the sound, though sharper and higher pitched, cannot be heard so far away.

THE United States leads the world in the number and extent of its libraries. The public libraries of all Europe put together contain about 21,000,000 volumes; those of this country contain about 50,000,000.

LEMONS are used for soap in many countries where they grow. When the men and women of the East Indies want to wash their hands, they squeeze the juice of a lemon over them briskly in water until they are clean.

PHILADELPHIA has a pretty Quaker pharmacist, Dr. Susan Hayhurst, of the Woman's hospital. She is pharmacist-in-chief and an authority in hygienic matters. By way of recreation she looks after the lawns, gardens and trees on the hospital grounds.

THE youngest and favorite daughter of the late Hugh Hastings, the publisher and politician, of New York, is the wife of an English country gentleman living at Slindon, in Sussex county. In her younger days she was a notably pretty girl and was engaged to Antonio Navarro, now the husband of Mary Anderson.

SOLOMON'S Temple, as described in the scriptures, would not be regarded as a very imposing structure in this day and age of the world. Its length was 107 feet, breadth, 36 feet, and it was 54 feet in height, with a portico or veranda 39 feet long and 18 feet wide. We have private houses in St. Louis that overshadow such an unpretending structure.—*St. Louis Republic.*

MRS. WILLIAM ASTOR has a wonderful snake ring, which literally writhes in constant motion on her hand. It was made in Egypt, and is of flexible gold wire, each scale represented by a ruby, an emerald and an amethyst. The lightest movement of the finger sets the wires quivering, and the ring scintillates and seems to go around the finger with a serpentine movement as if it has something very in it.

FOREST TREES FOR MISSOURI.—In a circular on "Arbor Day," published by the secretary of the Missouri State Horticultural Society, the following trees are recommended for planting: Of native trees, the elm, maple, ash and boxelder, and the sugar maple, tulip and linn, when they can be obtained. The sycamore is recommended for cities, as it stands coal smoke. The best evergreens are considered to be the red cedar, Norway spruce and white pine.

ON July 1, 1891, in accordance with the Act of congress, the weather bureau was transferred from the war department to the department of agriculture. Only eight months have passed since that time, and yet the bureau has been entirely reorganized and its efficiency greatly extended. In addition to nearly 200 official stations for observation, sending out and displaying the weather forecasts, there are now nearly 3,000 voluntary stations distributed in all parts of our vast territory, and which number is constantly increasing. The secretary of agriculture and the chief of the weather bureau particularly desire to have the weather forecasts of still greater usefulness to the farmer. To this end, and in hearty co-operation with a number of farmers' organizations that have made special requests for the service, the number of stations for the display of the weather forecasts, the sounding of steam-whistles by mills and factories, etc., is now being greatly increased. By the use of the telegraph and telephone the "probabilities" will ere long reach a very large majority of the population of the entire country from 24 to 36 hours ahead of the coming changes for better or for worse.

Farmers are thus availing themselves of modern improvements, the intelligent, concerted use of which must result in hastening the brighter day for agriculture that now seems so close at hand.

INDIAN ORIGIN OF MAPLE SUGAR.

There are many references to the use and manufacture of maple sugar by the early travelers among American Indians. H. W. Henshaw has collected a number of these accounts in the "American Anthropologist," and the evidence seems to point strongly to the Indians having possessed an independent knowledge of the manufacture. Lafittall, the period of whose observation dated back to 1700-5, describes how in March the Indians make transverse incisions in the trunks of trees with their hatchets, from which trickles an abundance of water, which they afterwards boil over a fire. He says the sugar thus made has nearly always a burnt taste, but that the French make it better than the Indian women, from whom they learned how to make it. Bossu, writing in 1756, is equally explicit as to the source of sugar making. Keating also offers some satisfactory testimony from the Indian's side of the question, from observations among the Kickapoos. Allusions to the manufacture of sugar by the Indians are not uncommon in early colonial times, but most authors appear to have taken it for granted that it was an Indian art, and so passed it by with a word. Mr. Henshaw adduces linguistic evidences tending to show that the Indian names for sugar and maple sugar were usually the same; that the terms for the latter were aboriginal, date from a remote antiquity, and are connected with the evidence he regards as sufficient, or, at least, presumptive proof that the Indians were in no wise indebted to the Europeans for their knowledge of maple sugar.

FRACTIONAL CURRENCY SCRIP.

A movement in favor of the issue of fractional currency is in progress. Business men who conduct a large business by mail are much annoyed by the want of some mailable form of currency. Silver coins are too heavy and bulky for transmission by mail, and are far from safe, as any one who handles the letter can ascertain their presence. Postage stamps have come into extensive use for the transmission of small amounts, and this has become, in many cases, a positive annoyance, owing to their accumulation on the hands of merchants. They are also bought at post-offices which, under the law, obtain no credit for selling them. We believe that, from these points of view alone, the reintroduction of "fractional currency" would be an excellent enactment on the part of the government.—*Scientific American.*

BETTER HIGHWAYS.

The importance of better highways is often overlooked. We get used to bad roads and blame the weather and trudge along. As a people, we can rightly lay the responsibility at our own doors. We have not demanded it. We have not worked for it, and we will not have good roads until we do.

CULTURE OF BEETS IN OHIO, AND HOW THEY MAY BE UTILIZED.

The second number of 1892 of the bulletin of the Ohio experiment station summarizes the experience of the station in the culture of mangolds and sugar beets. Mangolds have been grown on the station farm for ten or twelve years past, to serve as food for the dairy cows, 12 to 15 tons per acre being an ordinary yield. The beets are eaten with great relish by the cows, they cause an increased flow of milk, and the milk is thought to be of a better quality. The milk from this dairy is sold direct to consumers, and these have claimed that they could tell when beet feeding began in the fall by the improved flavor of the milk.

In 1891 a number of varieties of sugar beets were grown alongside the mangolds; it was found that the sugar beets were considerably less productive than the mangolds, yielding but 7 to 9 tons per acre against 12 to 20 tons for the mangolds. The sugar beets, however, showed on analysis about six per cent of sugar, while the mangolds showed but three per cent.

The labor cost of producing an acre of beets is from thirty to forty dollars, as grown at the station, where they are planted in rows sufficiently wide to admit a horse culture. By planting in rows only half as far apart the crop might be largely increased, but the cost of cultivation would also be increased.

In a bulletin issued a year ago by the chemical division of the United States Department of Agriculture, a table is given showing that the average cost of manufacture in 113 German beet-sugar factories in 1889-90 was nearly \$3.00 per ton of beets. If it were possible to raise an average crop of fifteen tons per acre of sugar beets in Ohio at a cost of \$30.00 per acre, or \$2.00 per ton, to manufacture them at a cost of \$3.00 per ton, the total cost for production and manufacture would be \$75.00 per acre. Such a crop would yield 1,800 pounds of sugar, at the rate shown by the station analysis, worth \$72.00, at four cents per pound, thus leaving no margin whatever to either producer or manufacturer to cover the losses from bad seasons on the farm or in the factory. It is true the present bounty would afford this margin; but the bounty ends with 1895, unless renewed, and its future is very uncertain.

Sugar beets grown in the dry climate and on the rich soils of Nebraska and Iowa show an average of about thirteen per cent sugar, or more than twice that found at the Ohio sta-

tion, thus following the well-known law that the sugar beet reaches its highest development in northern latitudes. Beets grown in northern Ohio would probably show a higher per cent of sugar than has been found at the station, but it is extremely doubtful if the culture and manufacture of sugar beets can be made profitable in any part of Ohio in competition with the more favored regions of the Northwest and of California, and the experiment station would advise Ohio farmers to be very cautious about entering upon any large undertaking in sugar beet culture.

There are probably spots in northern Ohio where spring wheat could be grown, and it is possible cotton might mature in sheltered coves in Lawrence county; but it would hardly be advisable for the farmers of either section to enter into competition with the spring wheat growers of the Northwest or the cotton planters of the Gulf states.

JEAN INGELOW is now a gray-haired little old woman of sixty-three years. She is a kind friend to the poor, and at regular intervals gives them what she calls "copyright diners" from the proceeds of her books.

THE LOW-DOWN CHAMPION

Lowest. Lightest. THRESHER. Simplest and Best Machine made. Write for Catalogue. Address, mentioning this paper, Orrville Machine Co., Orrville, Ohio.

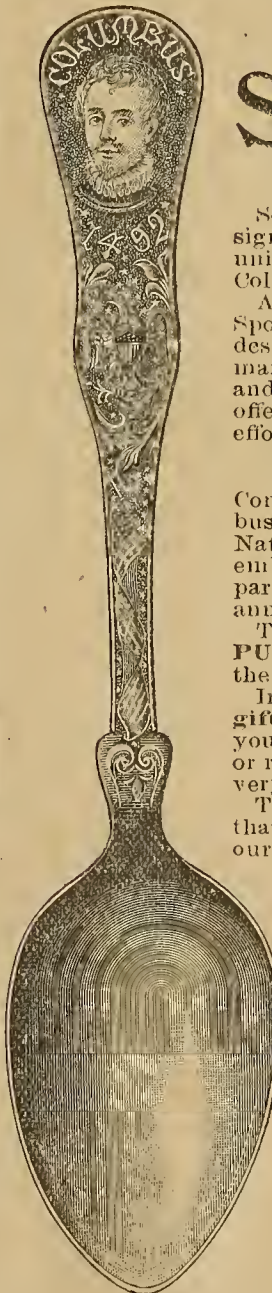
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MENTION THIS PAPER WHEN ANSWERING ADVERTISEMENTS.

Smiles.

THE SPLINTER TOOTHPICK.

The table-cloth was fresh and neat,
The china bright, the vlands sweet,
And slim and straight beside the meat
Stood proudly up—the toothpick.

Stood stiffly as a toothpick ought,
Which once was shunned but now is sought,
For time is turned and forward brought
To prominence the toothpick.

The dinner done they passed it 'round,
And none said "Nay," and no one frowned,
But all with dignity profound
Applied the nimble toothpick.

Oh, other things of meanest sphere,
Combs! tweezers! brush! The time draws near,
Perchance, when each shall be the peer
Of the promoted toothpick.

—Good Housekeeping.

MARY HAD—

Mary has a little pug,
But not as you suppose—
Because it's not of canine breed:
The pug is in her nose.

—Newark Standard.

THE POINT EXPLAINED.

Two little bootblacks stood looking wistfully in the show window of a Clark street cigar store one afternoon. They were typical street arabs, with all the tough ways and bad habits of their class. They wanted to smoke, and their eyes were bent upon a box of "cabbage-leaf" cheroots, which were labeled "two cents each."

"Say, Chimmie," said the taller arab, "I t'ink I'd enjoy a bloody good smoke just now."

"I'm wid yer," replied "Chimmie," smacking his lips in anticipation of a cigar.

"But, yer see, de on'y trouble wid me is dat I'm plumb broke."

"Is dat so? Well, I've just got two cents."

"Give it ter me, den."

"What fur?"

"Why, ter buy wan ob dem air cheroots, in course."

"But I want smoke, too."

"N so do I."

"How kin the both of us do it?"

"I'll tell yer wat ter do. Yer must give me de two cents an' we'll organize a stock company. Yer see, you is de capitalist. I'm de inventor; so yer give der coin to me, den I buys de cigar and yer becomes stockholder. See?"

"Yas," responded "Chimmie," doubtfully.

"But how does that ben'fit me any? Yer has de cigar, doesn't yer?"

"Yas."

"An' yer smokes it, don't yer?"

"Yas, but don't yer see, I'm de organizer, so in course I smokes de cigar."

"What'll I do?"

"Why, you're de stockholder, yer kin spit. See?"—Chicago Tribune.

THE LANGUAGE WAS TOO HIGH.

The Lewiston (Me.) Journal tells this story about a somewhat illiterate Maine woman who had just returned home after a visit to New York:

"Oh," she said to a friend, "I had such a perfectly lovely time, everything was so convenient, you know. We stopped in a house where we rode up to our room in a refrigerator, and I always had my washing done at the foundry, right in the house. It was awful nice. Then there weren't no stove and no clutter in the rooms. Then there was one of these legislators right in the floor, and the heat poured right up through."

"How did it happen that you came back so quickly?"

"Oh, well, you see, Sairy didn't have no appetite. I had the hardest work to get her anything that she could realize. Honestly, when I got her home she was almost an individual."

TIME TO RUN.

Pretty girl teacher—"What! Do you intend to withdraw from the Sunday-school?"

Wah Lee—"Yessee. Me fliladee stay here."

Pretty girl teacher—"Afraid? What are you afraid of?"

Wah Lee—"Thlsee leap-year."—New York Weekly.

READY FOR AN ARGUMENT.

Mother (reprovingly to little girl just ready to go for a walk)—"Dolly, that hole was not in your glove this morning."

Dolly (promptly)—"Where was it, then?"—London Truth.

\$100 REWARD. \$100.

The readers of the FARM AND FIRESIDE will be pleased to learn that there is at least one dreaded disease that science has been able to cure in all its stages, and that is Catarrh. Hall's Catarrh Cure is the only positive cure now known to the medical fraternity. Catarrh being a constitutional disease, requires a constitutional treatment. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system, thereby destroying the foundation of the disease, and giving the patient strength by building up the constitution and assisting nature in doing its work. The proprietors have so much faith in its curative powers, that they offer One Hundred Dollars for any case that it fails to cure. Send for list of testimonials. Address, F. J. CHENEY & CO., Toledo, O. Sold by Druggists, 75c.

SHORT RATIONS.

The Widow Flapjack keeps a boarding-house in Harlem, and we regret to say that she does not give her boarders as much as they can eat. Gus de Smith in particular is given to grumbling about the fare. A few mornings ago she gave him a very small piece of beefsteak, but instead of masticating it he merely folded his arms and looked at it—like Napoleon at St. Helena.

"Why don't you eat your steak?" asked the Widow Flapjack.

"It's too hot."

"Blow it, then."

"I am afraid to."

"Why?"

"For fear it will blow away, it's so small."—Texas Siftings.

THAT IRREPRESSIBLE BOY.

"You didn't bring your wife with you, Mr. Jones?" said the small boy of the house, addressing the guest.

"No, my boy. Would you like to see her?"

"Yes. Leastways, I would like to see her thumb."

"See her thumb? What do you want to see her thumb for?"

"Well, ma says your wife keeps you under her thumb, and I'd like to see it, for it must be a pretty big one."

LABOR-SAVING MACHINES.

The reporter had been interviewing the walking delegate at considerable length. Finally he inquired:

"Do you believe in labor-saving machines?"

"No, sir," was the emphatic response.

"Not even in the domain of the household?"

The walking delegate hesitated a moment for thought.

"Well," he said at last, "I suppose a man might have a wife."—Detroit Free Press.

HE WAS PLEASED TO HAVE MET HIM.

One of our most exclusive citizens fell out of his third-story window the other day, but broke his fall by lighting on the head of a man who was putting in coal.

"I am not usually desirous of cultivating the acquaintance of the lower class," he said as he got up; "but I am pleased to have met you."—Texas Siftings.

A REGULAR THING.

Visitor—"What bright eyes you have, my little man! You get plenty of sleep, I presume?"

Little man—"Yes'm. Mamma makes me go to bed every night at eight o'clock."

Visitor—"So you will keep healthy?"

Little man—"No'm. So she can mend my pants."—Street & Smith's Good News.

THE SICK IRISHMAN.

An Irishman was painting a house green when the paint-pot fell to the sidewalk.

A woman chanced by. "Mercy! what's the matter?" she exclaimed.

And the small boy standing near shouted: "That Irishman up there has just had a hemorrhage."

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A NOTEWORTHY EXCEPTION.

A severe wind-storm was prevailing on wash-day in the capital city and playing havoc with the clothes-lines. The colored maid-of-all-work rushed into the house with excitement written upon her dusky countenance. Emerging from the basement, she called out, in tones that carried her startled information throughout the house, and even to the ears of the callers in the parlor: "Fo de Lawd, missus, all de han'ke'chi's done biu stole, 'cep'n de socks!"—Harper's Monthly.

HARD TO PRESCRIBE.

Attendant—"The living skeleton is sick."

Manager—"Great heavens! What ails him?"

Attendant—"He's got a pain, but he's so thin the doctors don't know whether it's cramps or backache."

A SCIENTIST'S OPINION.

Mrs. Musicmad—"Doctor, why is it that all the great piauists have such long, bushy hair?"

Professor Savage (reflectively)—"I presume it is to keep off the flies while they are performing."

KNOWLEDGE IS WEALTH.

Druggist—"You might have charged that young man two dollars for filling that prescription. Why did you put the price at twenty-five cents?"

Clerk—"He understands Latin."—Good News.

A LONELY MORTAL.

Bilkins—"How de do? Had the grip yet?"

Wilkins—"No."

Bilkins—"I'm sorry for you, old fellow. What on earth do you talk about when you meet people?"—New York Weekly.

KNEW HIS LITTLE GAME.

Mr. Courter (to her little brother)—"Now, my nice little man, come and tell me how old you are."

Her little brother—"I know yer; sister's twenty-six."—Harvard Lampoon.

UNDENIABLE.

"Begorry," said Pat, as he tried to stop the leak in his roof, "it's a thrue sayin' that it niver pours but it rains."

LITTLE BITS.

It is rumored that Dr. Keeley is to start a branch of his gold cure industry in Kentucky. Can the world's gold supply stand such a drain?—Yale Record.

Miss Ava Beane—"Speaking of rare books, did you ever see our old 'New England Primer'?"

Mr. Wallst—"Heavens, no! Was it, really?"—Puck.

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U. S. DEPARTMENT OF AGRICULTURE.—(Washington, D. C.) Chemical division, bulletin No. 31. Proceedings of the eighth annual convention of the association of Official Agricultural Chemists, held August 13-15, 1891. Division of vegetable pathology. Farmers' bulletin No. 5. Treatment of smuts of oats and wheat. Office of experiment stations, Experiment Station Record, Vol. III, No. 7.

ALABAMA.—(Auburn) Bulletin No. 33, December, 1891. Experiments with cotton, 1891. Fourth annual report. Bulletin No. 35, January, 1892. Glanders.

ARKANSAS.—(Fayetteville) Fourth annual report.

COLORADO.—(Fort Collins) Bulletin No. 18. Index to first seventeen bulletins.

DELAWARE.—Third annual report for 1890.

KANSAS.—(Manhattan) Bulletin No. 25, December, 1891. Experiments with sorghum. Bulletin No. 26, December, 1891. A comparison of varieties of the strawberry. Bulletin No. 27, December, 1891. Crossed varieties of corn, third year.

MASSACHUSETTS.—(Hatch Station, Amherst) Fourth annual report for 1891.

NEVADA.—(Reno) Bulletin No. 14, December, 1891. Potato experiments.

NORTH CAROLINA.—(Raleigh) Thirteenth and fourteenth annual reports for 1890 and 1891. Bulletin No. 82, January 15, 1892. Fertilizer analyses.

OHIO.—(Columbus) Bulletin No. 10, Vol. IV. Tenth annual report for 1891.

ONTARIO.—(Ottawa) Report on the production and manufacture of beet sugar.

PENNSYLVANIA.—(State College) Bulletin No. 18, January, 1892. Notes on new and old varieties of orchard fruits and small fruits.

WASHINGTON.—(Pullman) Bulletin No. 1, December, 1891. Announcements.

WYOMING.—(Laramie) Bulletin No. 5, February, 1892. Best varieties and breeds for Wyoming.

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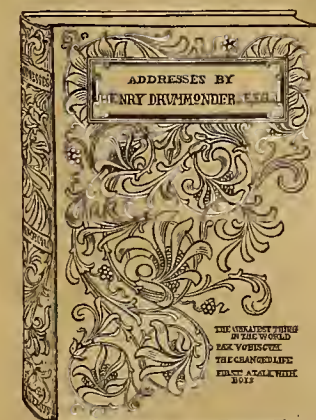
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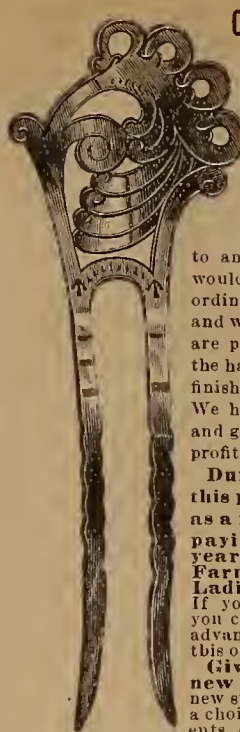
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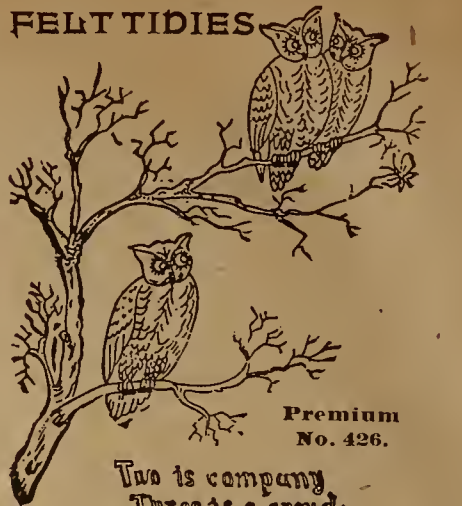
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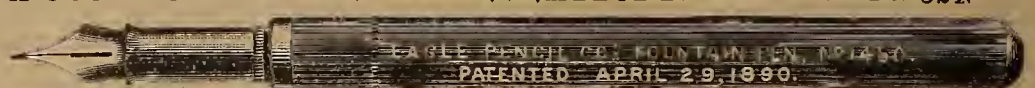
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Premium No. 324.



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Because of its great convenience, everybody should carry a Fountain-pen, and the only excuse for not doing so has heretofore been the cost of a good one. Now there is no excuse as the excellent pen we offer is placed within the reach of everybody. This perfect Fountain-pen is a triumph of ingenuity combining the good features of old styles with new improvements. With this pen in your pocket you are always prepared with pen and ink, at all times and places, and yet it is but little larger than a lead-pencil, and just as convenient for carrying in the pocket. The holder contains a supply of ink that will last the average writer several weeks, and may be refilled with ink in a moment.

During the next 30 days this Pen will be mailed Free to any one paying 50 cents for one year's subscription to Farm and Fireside or Ladies Home Companion. If you are already a subscriber you can have your subscription advanced one year by accepting this offer.

Given as a premium for 1 new yearly subscriber, and the new subscriber is also entitled to a choice of one of the free presents offered on this page. See "Who is a New Subscriber?" at bottom of page.

We offer it for sale for 25 cents. Postage paid by us in each case.

SILVER PLATED BUTTER KNIFE AND SUGAR SHELL.

These useful articles are made in an elegant, neat and stylish pattern by a leading manufacturer. They are first nicked and then plated with silver. With reasonable care they will last for years, and give satisfaction wherever they are used. During the next 30 days both will be mailed Free to any one paying 50 cents for one year's subscription to the Farm and Fireside or Ladies Home Companion. If you are already a subscriber you can have your subscription advanced one year by accepting this offer.



Premium No. 325.

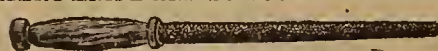


Our New Pattern.

Both given as a premium to any one sending one new yearly subscriber, and the new subscriber is also entitled to a choice of one of the free presents offered on this page. See "Who is a New Subscriber?" at foot of this page.

We offer either one for sale for 20 cents, or both for 35 cents. Postage paid by us in each case.

EMERY KNIFE AND SCISSOR SHARPENER.



Full size 12 1/2 inches long.

Premium No. 40.

Perfection at last. The best and simplest sharpener ever invented. The cutting surface is made of the hardest mineral known, and with it, scissors, bread-knives, carvers, chopping-knives, and every cutting instrument in the house can be easily kept in condition. This is undoubtedly the most practical article for the purpose that is made.

During the next 30 days this Emery Knife and Scissor Sharpener will be given as a free present to any one paying 50 cents for one year's subscription to the Farm and Fireside or Ladies Home Companion. If you are already a subscriber you can have your subscription advanced one year by accepting this offer.

Given as a premium for 1 new yearly subscriber, and the new subscriber is also entitled to a choice of one of the free presents.

We offer it for sale for 25 cents. Postage paid by us in each case.

PLUSH PIECES.

Premium No. 427.

This package contains plush pieces of the latest and handsomest colors. Perfect goods, in quality, color and finish fully equal to whole piece goods, and we are only able to offer them as we do by purchasing the short pieces or ends from an endless variety of pretty and useful articles and trimmings that can be made from these pieces. The package contains 8 pieces, 3 by 6 inches. No two pieces of the same color.

During the next 30 days these pieces will be given as a free present to any one paying 50 cents for one year's subscription to the Farm and Fireside or Ladies Home Companion. If you are already a subscriber you can have your subscription advanced one year by accepting this offer.

Given as a premium to any one sending 1 new yearly subscriber to either paper, and the new subscriber is also entitled to a choice of one of the free presents. See "Who is a New Subscriber?" at bottom of page.

We offer them for sale for 20 cents. Postage paid by us in each case.

GRAND PRIZES FOR LARGEST CLUBS

Given in addition to the Free Presents to subscribers and valuable Premiums or Big Cash Commissions to agents. Each week during this month only the choice of the First Grand Prizes offered below will be awarded to the persons sending in the largest club of subscribers to this paper; and the choice of the Second Grand Prizes will be awarded to the person sending the second largest club.

FIRST GRAND PRIZES.

Singer Sewing Machine, equal to other \$55.00 machines.

Gents' Gold Watch, genuine American jeweled movement, gold-filled hunting-case, warranted for 15 years.

Ladies' Gold Watch, the same make, movement and case as the gents' and of equal value.

The names of the winners of Grand Prizes for the weeks ending April 23d and 30th will be announced in our issue of May 15th.

NAMES OF PRIZE WINNERS.

For the Week Ending March 19th, 1892.

Wm. J. Beardsell, Buffalo, N.Y., was awarded his choice of First Grand Prizes offered, for sending 26 subscribers, the largest club received during the week.

A. R. Moore, Idana, Kansas, was awarded his choice of the Second Grand Prizes offered, for sending the second largest club, 25 subscribers.

The Special Grand Prize, a \$50.00 Buckeye Incubator, was awarded to B. F. Bosserman, Middletown, Mich., for sending the largest club of subscribers during March. This incubator is manufactured by The Buckeye Incubator Co., Springfield, Ohio, who will send their treatise and catalogue to any address upon receipt of two-cent stamp.

For the Week Ending March 26th, 1892.

Alice J. McElroy, Rosemond, Ill., was awarded her choice of the First Grand Prizes offered, for sending 39 subscribers, the largest club received during the week.

Vinnie A. Enrich, Chesterfield, Va., was awarded her choice of the Second Grand Prizes offered, for sending the second largest club, 27 subscribers.

Who is a NEW Subscriber? The above offers are made to increase our subscription list, therefore a change from one member of a family to another is not securing a new subscriber. A new subscriber must be a person who is not now on our subscription list, and one whom you have sought out and solicited to take the paper. Sending your own subscription, or the name of your wife, husband or any other member of your own family, is not sending a new subscriber in the sense we intend it, and will not entitle you to an additional premium. You may count your own name, or the renewal of any former subscriber, towards a premium when three or four names besides your own are sent, as this shows you have actually done some work, and been out among the people telling them of the merits of our paper.

For any article on this page, order by the Premium Numbers and address letters to

FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio.

1492

A Remarkable and Fitting Tribute to America's Four Hundredth Anniversary.

1892

A MAGNIFICENT OLEOGRAPH, REPRESENTING

Columbus at the Royal Court of Spain.

The supreme moment in the life of Christopher Columbus as he stands before King Ferdinand and Queen Isabella, in the Royal Court of Spain, has been made the subject of a

WONDERFULLY BEAUTIFUL and EXPRESSIVE PAINTING

By the famous Artist, M. BROZIK.

It occupies a space 25 feet by 14 feet, in the Metropolitan Art Museum, in New York City, having been presented to that institution by Mr. Maurice K. Jesup, a wealthy resident of New York.

A LARGE FORTUNE

would not represent its present value, and its artistic merit makes it one of the greatest attractions in this gallery, which is the largest and most celebrated in our land.

A "BONANZA"

FOR

AGENTS!

Every family will jump at the chance to secure a copy of this picture and a year's subscription to a good home paper for the small sum of \$1. Write at once for information regarding agent's outfit and terms. It will cost you nothing to investigate, and may put \$15.00 to \$25.00 a week in your pocket!

DESCRIPTION OF THE PICTURE.

It is impossible to convey in words an adequate impression of the grandeur and beauty of the picture. The royal court of Spain, with King Ferdinand and Queen Isabella robed in the gorgeous apparel suitable to their high station, and surrounded by the Lords and Ladies attendant upon the court, all attired in the picturesque dress of that day, listening with rapt attention and breathless interest to the impassioned appeal by Columbus, for their influence and aid to enable him to accomplish the one controlling passion of his life.

Columbus, of course, is the principal figure of the painting. In your own mind try to imagine what this moment was to him, after long and fruitless efforts to obtain the necessary aid, to finally find himself in the favor of kings and queens, with the desire of his life just within reach. The picture contains 27 figures, everyone a study in itself.

THE ARTIST.

Vacslav Brozik, the artist to whose magic pencil we are indebted for this faithful representation of the first act in American history, was born at Pilsen, Bohemia, in 1852. As soon as he could handle a pencil he began to draw. His evident talent induced his relatives to make him an artist. He studied at the Academy of Art, in Prague, under the foremost living artists, Piloty and Munkacsy. His pictures soon began to attract attention, and brought him great fame and honor. His name was heard in all art circles, and lovers of art made long journeys to study his pictures. Brozik is not unknown in America. Many of his small pictures grace the private collections of American art-lovers.

THE COLUMBIAN EXPOSITION, OR WORLD'S FAIR, celebrating our anniversary of the discovery of America, will awaken great interest in this painting, and has led us to engage the most talented and skilful artists in the world to reproduce this masterpiece of art in its minutest detail, brilliant coloring and wonderful beauty. These artists have promised to give us the pictures May 1st. A correct and perfect oleographic copy, in the 14 original colors, will be secured, regardless of the cost. If only a few hundred pictures were made

Their Actual Cost Would Be \$10.00 or \$15.00 Each,

but we have contracted for enough to supply the many thousands of our readers whom we believe will accept this opportunity of securing a valuable work of art (which this picture will certainly be), at a price made possible only by our large orders. The size of our reproduction will be 20 by 29 1/2 inches. To introduce this picture to our readers and extend the circulation of our publications, we will give a copy or reproduction of this

FAMOUS PAINTING FREE

In all the original colors, to any one sending us 3 yearly subscribers to this paper, at the regular price, 50 cents a year. Or, to any one sending 3 subscribers who accept any of our premium offers in connection with a year's subscription to this paper.

Price, including one year's subscription to this paper, only \$1. Postage paid by us in each case. Orders for the pictures may be sent now, and will be promptly filled upon completion of the work by the artists. First come, first served.

AGENTS can easily earn big wages selling this grand picture. Everybody will want it and the first in the field will reap the sure harvest. Write for terms to agents.

QUEEN ISABELLA.

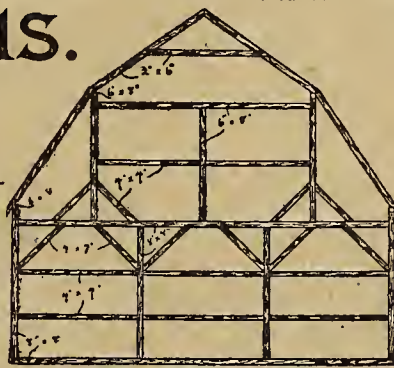
To Queen Isabella Columbus was directly indebted for the means, the men and the ships to fit out his expedition of discovery. Her support of the undertaking stands out in marked contrast to the timidity and doubting of many of her advisers, who could see nothing but the imaginings of a dreamer in the theories of Columbus. She was possessed of unusual beauty and comeliness of person, and also of a nobleness and purity of heart and mind that made her the more respected, loved, and almost worshipped by her subjects. Whether considered as she rode about through her kingdom, as she was wont to do, much of the time on horseback, or among the lords and ladies at her court, with all its magnificent surroundings, or at the head of her armies, leading and cheering them forward as none of their mighty generals could do, she was always the same generous, true and lovable woman—a leader of her people. Such a woman it was who undertook this enterprise, which had been explicitly declined by other powers, and who, against opposition from her own advisers, said: "I will assume the undertaking for my own crown of Castile, and am ready to pawn my jewels to defray the expenses." It was thus she expressed herself after hearing the proposals of Columbus and seeing them in their true light, one point of which, the carrying of the gospel to the new and undiscovered country, had a great influence upon her. No sooner had she given her support to the project than she prepared to forward the preparations with all her characteristic promptness and enthusiasm, and she remained true to her agreement with Columbus during his several voyages and until her death. This beautiful queen is one of the prominent figures in the picture, and the honor of the discovery of America is justly shared by both Queen Isabella and Christopher Columbus.

BUILDING * PLANS.

Best Buildings at Least Cost.

Premium No. 447.

By one of the most successful architects of the day. The book contains Views, Plans and Estimates of 56 Modern Houses costing from \$650 to \$3,000; 4 Stables and a large number of plans prepared especially for our readers, of



Barns, Corn-cribs, Grain, Poultry, Ice and Smoke Houses, Arbors, Summer-houses, Filter Cisterns, etc.

A particularly valuable feature of the barn plans are the drawings, showing clearly the manner of framing, with sizes of timber, etc.

The plan of this barn gives, in addition to the elevation and end bent as shown here, a plan of bent each side of floor, side view of frame, basement plan and floor plan, with measurements noted on each. Any farmer, with this book and the help of two or three neighbors, can erect his own buildings.

The regular price of the book without the barn plans, etc., is \$1.00.

We offer the complete book and the Farm and Fireside or Ladies Home Companion one year for only \$1, or give it as a premium for five yearly subscribers to either paper, and each subscriber is entitled to one of the free presents.

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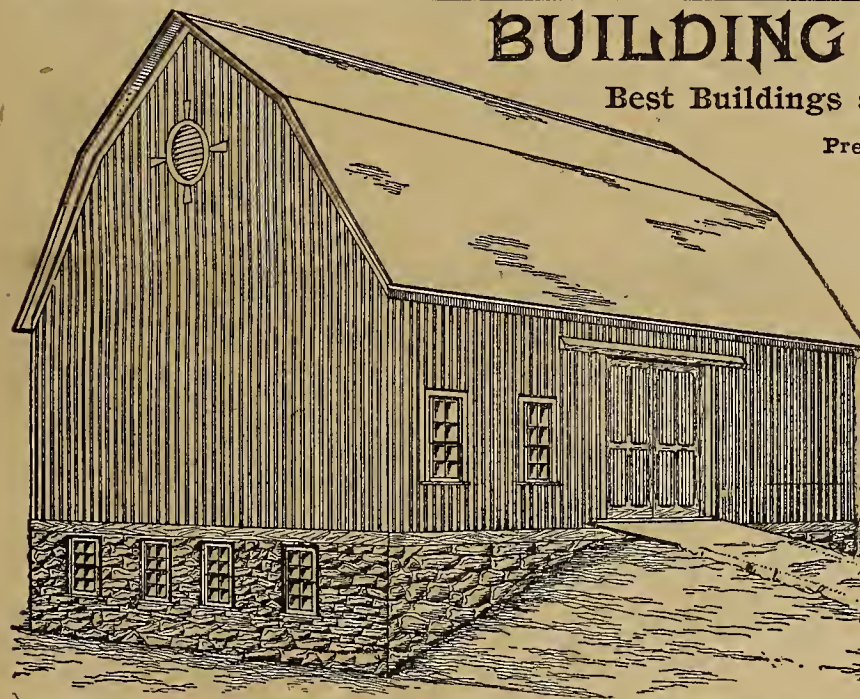
Premium No. 222.

Necessary articles on every table, and these are especially desirable, and will add greatly to the appearance of any table. They are of pretty shape and ornamented very tastily; made entirely of metal, it is impossible to break them, and the silver gives a pleasant variety to the setting of a table.

One (either a pepper or a salt) given as a premium for 2 yearly subscribers to the Farm and Fireside or Ladies Home Companion, and each subscriber is entitled to one of the free presents.

Price of one, including one year's subscription to either paper, 60 cents.

We offer them for sale for 25 cents each. Postage paid by us in each case. In ordering, state which is wanted, a pepper or salt.



Premium No. 199.

Your Own Miller.

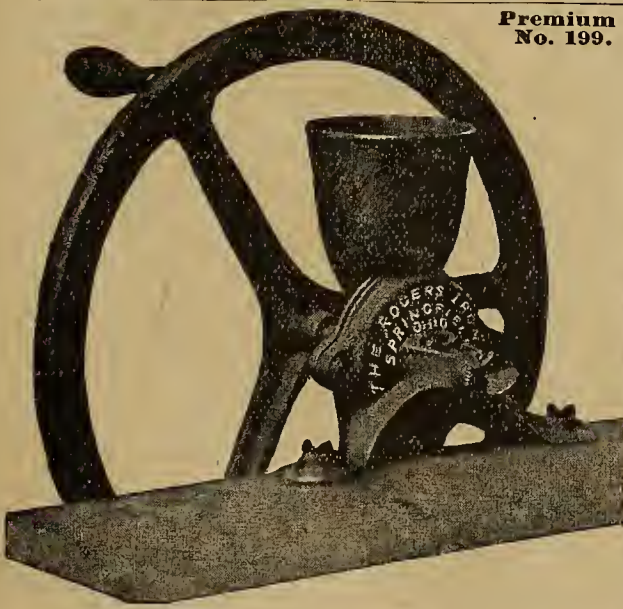
A Grist-mill for Family Use.

Will grind from fine flour to hominy. Adjusted in a moment. With this mill the farmer is independent of the grist-mill, which may be miles away. It is especially adapted for grinding corn, wheat, coffee or grain of any kind for domestic use or feeding purposes. Corn-meal, Hominy, Graham Flour produced fresh and pure in your own home. The grinding surfaces are made of very hard material, ground perfectly true, and the shaft is of steel. The mill is light running—can easily be operated by a child.

Given as a premium for 25 subscribers to either the Farm and Fireside or Ladies Home Companion, and each subscriber is entitled to one of the free presents offered.

Price, including one year's subscription to either paper, \$4.

We offer it for sale for \$3.75. Carefully crated and shipped by freight, unless otherwise ordered, receiver to pay charges, which will be small.



SET OF SIX TEASPOONS.



Premium No. 400.

STERLING
SILVER
PLATE.

To any one paying only \$1 we will send both the FARM AND FIRESIDE and the LADIES HOME COMPANION for One Year and give this BEAUTIFUL SET OF TEASPOONS

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In justice to old subscribers, whose subscriptions are paid up ahead, but who desire the spoons, we, for the first time, offer them for sale.

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THE ORIGINAL

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HARRIET BEECHER STOWE.

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Given as a premium for two yearly subscribers to either the Farm and Fireside or the Ladies Home Companion, and each subscriber is entitled to one of the free presents.

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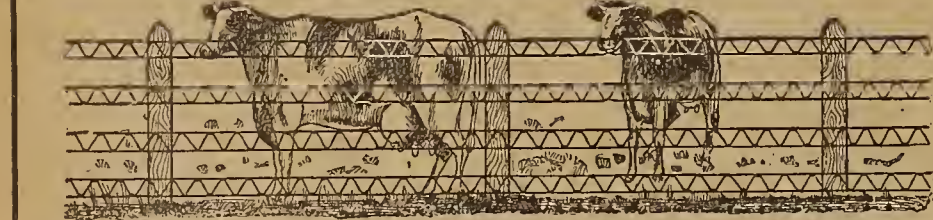
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It is the **ONLY BUTTER EXTRACTOR.** It is the Best Cream Separator, and has a capacity of 2,000 to 3,000 pounds per hour. We guarantee this machine in every respect—material, workmanship and separation of the cream—equal to any. The bowl is made of imported Swedish steel, the best and strongest steel in the world. It is superseding other cream separators, because of the larger amount of milk separated with greater thoroughness. Send For Full Illustrated Circulars.

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Manufacturers of Creamery, Cheese and Dairy Supplies.

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45 sold in '88
2,288 sold in '89
6,268 sold in '90
20,049 sold in '91
60,000 will be sold in '92

A Steel Windmill and Steel Tower every 3 minutes. These figures tell the story of the ever-growing, ever-going, everlasting Steel Aermotor. Where one goes others follow, and we "take the country."

Though sold, we were unable to make all of the 20,049 Aermotors in '91. Orders often waited 8 weeks to be filled, but now we have vastly increased our plant and are prepared promptly to plant our increase in every habitable portion of the globe.

Are you curious to know how the Aermotor Co. in the 4th year of its existence, came to make many times as many windmills as all other makers combined? How we came to originate the Steel Wheel, the Steel Fixed Tower, the Steel Tilt Tower?

1st. We commenced in a field in which there had been no improvement for 25 years, and in which there seemed no talent or skill, and none has yet been shown except in feeble imitation of our inventions.

2d. Before commencing the manufacture, exhaustive scientific investigation and experiments were made by a skilled mechanical engineer, in which over 5,000 dynamometric tests were made on 61 different forms of wheels, propelled by artificial wind, and therefore uniform wind, which settled definitely many questions relating to the proper speed of wheel, the best form, angle, curvature and amount of sail surface, the resistance of air to rotation, obstructions in the wheel, such as heavy wooden arms, obstructions before the wheel, as in the vaneless mill, and many other more abstruse, though not less important questions. These investigations proved that the power of the best wind wheels could be doubled, and the AERMOTOR daily demonstrates it has been done.

3d. To the liberal policy of the Aermotor Co., that guarantees its goods satisfactory or pays freight both ways, and to the enormous output of its factory which enables it to furnish the best article at less than the poorest is sold for. For '92 we furnish the most perfect bearings ever put in a windmill, and have made an exhaustive revision of the Aermotor and Towers.

If you want a strong, stiff, Steel Fixed Tower—or if you want the tower you don't have to climb (the Steel Tilt Tower) and the Wheel that runs when all others stand still that costs you less than wood and lasts ten times as long (The Steel Aermotor) or if you want a Geared Aermotor to churn, grind, cut feed, pump water, turn grindstone and saw wood, that does the work of 4 horses at the cost of one (\$100), write for copiously illustrated printed matter, showing every conceivable phase of windmill construction and work, to the **AERMOTOR CO.** 12th and Rockwell Sts., Chicago, or 12 Main St., San Francisco.

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With METAL WHEELS and SPRINGS at Ends of Beams.

This Cultivator has the rear ends of the beams pivoted to a Cross-head to which the beam or rod pivoted to the coupling in front and to the Cross-head in the rear, by which the Shovels are carried parallel with the axle, whatever may be the position of them in being moved sideways. The spring at the front part of the beams supports them when in use, and enables the operator to move them easily from side to side and assists in raising when he wishes to hook them up while turning at the end of the row. This Cultivator has NO EQUAL IN THE MARKET and can not fail to be appreciated by any farmer who sees it. We also manufacture the

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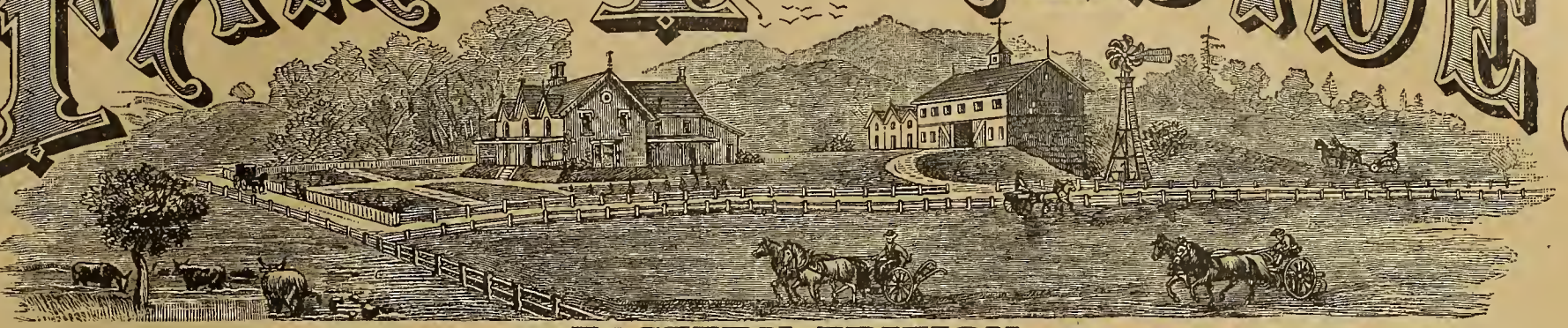
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FARM AND FIRESIDE.



EASTERN EDITION.

VOL. XV. NO. 15.

PHILADELPHIA, PA., and SPRINGFIELD, OHIO, MAY 1, 1892.

TERMS { 50 CENTS A YEAR.
24 NUMBERS.

The Circulation of FARM AND FIRESIDE
this issue is

250,700 COPIES.

The Average Circulation for the 24 issues of
the last 12 months has been

278,337 COPIES EACH ISSUE.

To accommodate advertisers, two editions
are printed. The Eastern edition being
100,300 copies, the Western edition
being 150,400 copies this issue.

Farm and Fireside has More Actual
Subscribers than any Agricultural
Journal in the World.

Current Comment.

THE beet-sugar bounty bill, that passed the lower branch of the Ohio assembly, was shelved in the senate committee of agriculture. That this industry can be wisely aided by government bounties is an indisputable fact. The beet-sugar industry of Europe was established and developed by government bounties. That Ohio may properly supplement the bounty given by the national government is not now in question.

The question that now interests Ohio farmers is, will it pay them to grow beets for sugar? In their efforts to answer this, it will pay them to hasten slowly. This much is already known: Beets can be grown over a very large area in this country, but beets can be profitably grown for sugar only in a part of this area.

The first thing to do is to make tests in a small way to see if the crop will be profitable. In this there are several things to determine—the cost, the yield, the quality, the per cent of sugar in the beets, etc. Take the percentage of sugar contained in the beets grown for test into consideration first. If these tests show that the same improved varieties of sugar-beets which contain 15, 16 or 18 per cent of sugar in California and Nebraska, contain only 10 per cent in Ohio, then Ohio farmers and manufacturers can save a great deal of money by keeping out of the beet-sugar industry. If, on the contrary, the sugar-beet product of the soil and climate of Ohio is up to the necessary standard (12 per cent is the minimum), then it will be well to go ahead and determine the other things necessary to settle the question. The profitable manufacture of beet sugar on a small scale is now entirely out of the question. To stand a chance of competing with the large factories now in successful operation, the new works must have a capacity of handling 300 or more tons of beets per day, and all that can be grown on 3,000 acres or more. An abundant supply of pure water, good railroad facilities, cheap fuel and many other things are necessary for the successful operation of the factories. Aggregation of capital for the construction of large sugar-works and co-operation among farmers to furnish an adequate supply of beets will come just as soon as farmers and capitalists are assured of reasonably certain profits in the sugar industry.

There are now in this country six large beet-sugar factories in successful operation—three in California, two in Nebraska and one in Utah. The three California factories last season turned out 4,000 tons of sugar. It will take three hundred and seventy-five such factories to supply the total amount of sugar consumed annually by the United States.

Whether Ohio will ever have any successful beet-sugar factories is in doubt. But Ohio farmers will be greatly benefited by the development of the sugar-beet industry that is certain to take place in other states. Every acre in Nebraska, for instance, that is devoted to sugar-beet culture is one acre less of grain and grass competition for them, and they, therefore, have a deep interest in the successful development of the industry in this country. They will indirectly share in the profits.

The existence of the sugar trust will hasten the development of the sugar industry in this country. Since Spreckles sold his Philadelphia refinery, at a profit of \$4,000,000, to the sugar trust, that organization has a monopoly of the business. An advance in prices will encourage the investment of capital in beet-sugar factories. And as these factories turn out a finished product, they will in time help destroy the trust.

ON his return home after a distinguished career as United States minister to France, the Hon. Whitelaw Reid was entertained at dinner by the Ohio Society of New York. Among many notable speeches of welcome was one by that prince of after-dinner orators, the Hon. Chauncey M. Depew, in which appears the following:

Only twice in the history of the relations between France and the United States as nations has France been prominently and interestingly in the eye and mind of the American people. First, when she gave us the assistance which secured our independence, and second, when there was negotiated with her a treaty which will be of incalculable advantage to the people of this country. In the first instance our minister was Benjamin Franklin, and in the second, Whitelaw Reid, both journalists.

Our poets, our orators and our great writers, in celebrating the glories of our western empire, have all failed to recognize in epic verse and fitting phrase that principal and perennial source of our prosperity, the American hog. He, more than any other agency, has solved the problem of the farm and the market. When the western farmer would be compelled to burn his corn because the price at the seaboard would not enable him to bear the cost of transportation, this intelligent animal consumes the corn, chemically works it up in his own person into profitable pork, and then transports himself to market to clear the mortgage from the farm and add to the wealth of his country.

The governments of the old world have always been jealous of our growth and prosperity, and fearful of the penetrating and propagating power of American ideas. They could not keep out Yankees, for they go everywhere. They could not keep out Yankee inventions, for their adoption was necessary if they would keep pace in industrial competitions. They could not keep out American wheat, because their fields were insufficient to raise their own supply. But in self-preservation and with marvelous unanimity, and backing up the effort with the whole force of their great armaments, they banished and then prohibited the re-entrance of the American hog. For eleven years this great staple of our country has been denied admission. The popular sentiment was so strong in favor of the prohibition that any attempt to remove it threatened to hurl the government of the day from power. It was to this most difficult task that Mr. Reid applied his ability and his energy. His success has moved the torpid pulse of the Chamber of Commerce to enthusiastic gratitude, and has done more for the commerce and wealth of our country than any single diplomatic transaction of the last decade.

UPON the formation of the government, one of the first acts of the first secretary of the United States treasury was to determine the relative value of the two metals to be coined into money—gold and silver. Hamilton's famous report of 1791 adopted the ratio of one to fifteen; the gold dollar to consist of 24.75 grains, and the silver dollar of 371.25 grains of pure metal.

Either this ratio undervalued silver or silver became cheaper, for gold soon became worth 3 per cent more compared with silver than the value stamped on the coin. As a result, gold was exported as fast as coined, leaving silver coin the only metallic money in circulation.

In order to keep both gold and silver coins in circulation, Congress passed an act in 1834 reducing the weight in the gold dollar and fixing the ratio 1 to 16. The first ratio established under-valued gold and it disappeared. The second ratio undervalued silver by 1½ per cent, and by 1840 the silver dollar had disappeared. In consequence of the discovery of gold in California and Australia, that metal cheapened and the relative value between it and silver became less. Then the subsidiary silver coins began to disappear. To prevent this the act of 1853 was passed, reducing the weight of silver in coins of less value than one dollar, and making them legal tender only in payments not exceeding five dollars at one time.

The act of 1834 practically demonetized the silver dollar because, under the ratio of 1 to 16, its bullion value compared with gold exceeded the value stamped on the coin. The act of 1853 effectually placed this country upon a gold basis. Only gold coins and subsidiary silver coins were turned out of our mint. From 1834 to 1873 the premium on the silver dollar averaged 2.2. The premium was about 3 in 1873. The famous act of 1873 made no provision for the coinage of the silver dollar in any form, because its bullion value being higher than its nominal value, it had long before ceased to be one of the coins in circulation.

The history of coinage legislation in this country shows conclusively that whenever, under free and unlimited coinage of both gold and silver, the bullion value of the coin of one exceeded that of the other, the cheaper money alone remained in circulation. The relative value of gold and silver is now 1 to 24. In view of these facts, it is absurd to suppose that we can now have free and unlimited coinage of silver at the ratio of 1 to 16 without driving gold from circulation and putting the country on a silver basis. Why do not the silver men offer to change the ratio?

A most commendable effort is being made to provide a special, comprehensive road exhibit at the World's Columbian Exposition. It is the golden opportunity of a lifetime to present to millions of citizens a great object lesson of the need, construction and maintenance of good roads.

Under the present arrangement and classification of exhibits, machines, materials, etc., used in road construction are distributed through several departments. Plows, rollers, engines and apparatus for excavating and making roads will be shown in the agricultural building; asphaltic compounds, paving-bricks,

granite blocks, rock-breakers, etc., in the building of mines and mining; street-rollers in machinery building; systems of drainage, carts, etc., in the transportation building; and systems of paving and draining, construction of roads and streets, drains and sewers, etc., in the department of manufactures and liberal arts. The visitor interested in the study of the best methods and machinery of road construction must visit five enormous buildings that cover an aggregate area of seventy-nine acres.

It is evident that, in order to take advantage of a very great opportunity, there should be a department of road construction and maintenance, and that all exhibits that relate to it should be grouped together in a separate building. There could be shown all the machinery used in road making, cross-sections of streets and roads built according to the various methods, specimen roads best adapted to gravel, clay or prairie regions, road and street materials, road building by skilled workmen, and, in fact, everything else that relates to this important subject. This would be a modification of the original plans, but it would be for the public benefit. Unless it is done, one of the greatest opportunities ever presented to arouse the public to the importance of good roads and to educate the people in their construction and maintenance will be lost.

Governor ABBOTT, to his honor and to the credit of his state, has vetoed the Reading coal bill that was railroaded through the New Jersey legislature. The main grounds of his refusal to approve the bill are its unconstitutionality and its failure to contain provisions that will absolutely protect consumers against arbitrary advances in prices by the combine.

THE Delaware agricultural experiment station has made some comparative tests of the cream separator and the butter extractor. The extractor goes a step farther than the separator and churns the cream separated by centrifugal force from fresh milk into butter. The results of the trials were in favor of the cream separator and the churn. They secured 93.34 pounds of butter out of every 100 pounds in the milk, while the extractor obtained only 84.60 pounds, and the quality of the sweet-cream butter was not equal to that from ripened cream. As a skimmer, the extractor was a success.

In regard to the merits of the machine the chemist of the station says:

"Although the extractor appears unfavorably in comparison with a much older method, it cannot but be regarded as a marvel of inventive and mechanical skill. The surprise is in the first instance that it should do its work at all, and then, even though it be found wanting, that it should do its work so well. It is brought at the start into competition with a highly perfected machine and a method thoroughly understood for many years of experience. Its shortcoming under the severe test to which it is obliged to submit ought not to be cause of disappointment; there is room rather for encouragement, because it has done so much. Its future development is probably a question of the relative merits of "sweet-cream butter" and "sour-cream butter."

FARM AND FIRESIDE.

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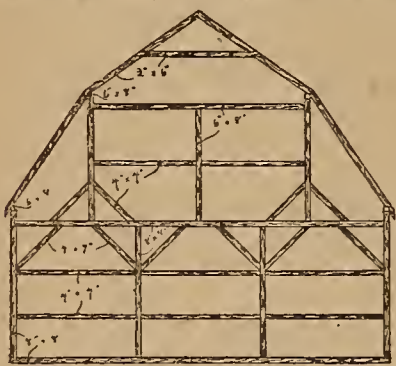
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vertised in several papers.

Our Farm.

SOMETHING MORE ABOUT OUR SPRAYING
MIXTURES.

BY JOSEPH.

FARM AND FIRESIDE of April 1st
has just been received, and I
noted what Prof. W. J. Green
had to say concerning my re-
marks about the Bordeaux mixture.
The old formula which I had especially in
mind when writing the article in question,
and which calls for six pounds copper
sulphate, four pounds lime and twenty-
two gallons of water, is yet recommended
by almost every station and agricultural
paper, and will probably be the one most
largely used the coming season. Prof.
Green says "it has been found that one
fourth this strength will answer the pur-
pose." I believe that our friend is some-
what exaggerating. Surely such dilution
(six pounds sulphate copper to eighty-
eight gallons water), although it may
prove all right, has not been sufficiently
tested to make its application safe and
advisable, we must remember that last
season was not a fungus year. Prof. Gallo-
way will recommend, for this year, the
following formula: Six pounds sulphate
of copper, four pounds lime, forty-five
gallons water. Prof. Fairchild stated
before the Western New York Horticul-
tural Society that the dilution to sixty
gallons would probably be effective. All
this goes to show that in regard to the
proper proportions and dilutions nothing
is as yet definitely settled. The fact re-
mains that the Bordeaux mixture is a
whitewashy, disagreeable compound, and
that it must be made with greater care
than average people exercise, in order to
work well. Now, I have asked a great
many of our authorities in regard to the
proportionate effectiveness of the Bor-
deaux mixture and the ammoniacal solu-
tion of copper carbonate, and all say that
the latter is almost as effective, but not
quite. This was, for instance, the reply



ELEVATION OF END BENTS.

given by Prof. Fairchild to my direct
question before the Western New York
Horticultural Society. Well, if it is al-
most as effective, I think we can make it
fully as effective by a little more thorough-
ness in and frequency of application.

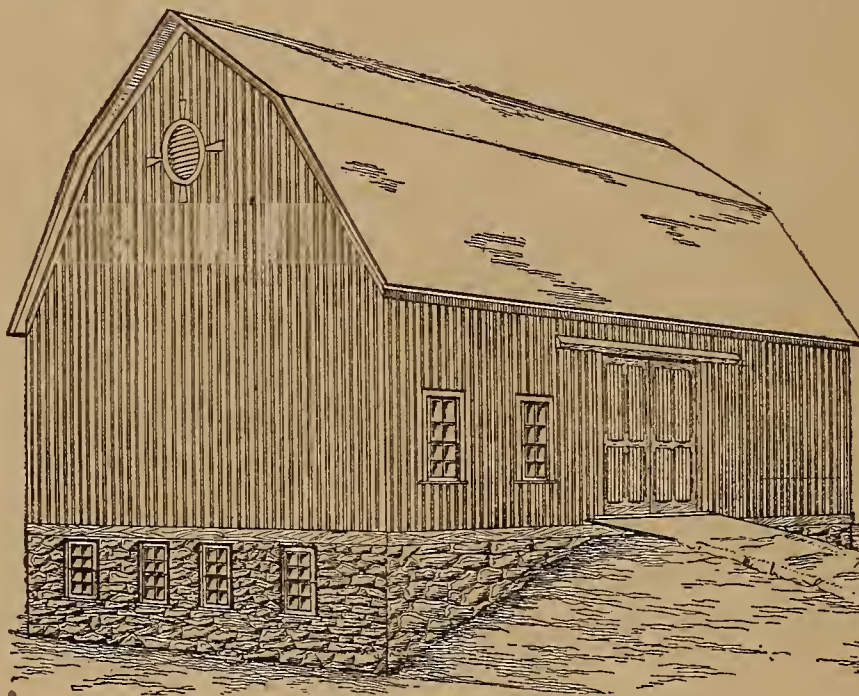
We have to depend on it for the later
sprayings; why not for the earlier ones?
I am sorry I cannot make tests on as
large a scale as the stations, as I have no
\$15,000 backing for them. But what tests
I did make last season, showed the effi-
cacy of the ammoniacal solution of car-
bonate of copper (I used copperdine) for
grape diseases in a most remarkable and
striking manner, even for the first applica-
tions. But I used it thoroughly. The
vines were first washed, soaked (twice)
with a saturated solution of sulphate of
iron, and then sprayed with the carbonate
solution every week or two. This treat-
ment almost annihilated the rot on vines
that the season before hardly gave a sound
berry. Vines not treated, however, were
again badly affected. So I have still a
great deal of faith in the carbonate solu-
tion, and find it much easier and handier
than the Bordeaux mixture, so long as I
can get it ready prepared in copperdine.

Friend Green should be acquainted with
me sufficiently to know that such an im-
portant point as this, that the Bordeaux
mixture is the only one which can be used
in connection with Paris green or London
purple, could not have been overlooked by
me. The fact is, I have called attention
to this very fact time and time again. It
is really the one redeeming feature in the
nasty compound, and just for this reason,
we will probably yet have to use it on
apple-trees, etc.; at least, for this coming
season! Yet my friends should not infer
that this point is definitely settled.
There are yet a great many uncertainties
connected with this very thing. A com-

London purple, made in accordance with
orthodox teachings.

Now, in regard to the cost of these spray-
ing mixtures. I objected to the Bordeaux
mixture on account of expense. All mix-
tures are terribly expensive when we
have to buy the ingredients in local drug
stores at retail, and this is about the only
thing that a person can do who uses only
a small quantity for experiment. Drug-
gists, for instance, would think
nothing of asking twenty-five cents
a pound for blue-stone (sulphate of
copper), and fifty cents or more a
quart for liquid ammonia (26°).
Powell quotes blue-stone at twenty-
five cents for a five-pound package,
or three and three fourth cents per
pound by the barrel. If you buy it
in this way, and dilute according to
Prof. Galloway's formula, the Bor-
deaux mixture is not expensive.

I do not take as much stock in the
statements of "scientific people" as
some do. They may see the grass
grow through their microscopes, and hear
potato-bugs breathe through their stetho-
scopes, but in practical matters they are
often unable to see two inches beyond their
noses. Prof. Van Slyke, of the New York
Experiment Station (Geneva), for instance,
in criticising before the Western New York
Horticultural Society, the statement made
by me that copperdine was the cheapest
of our fungicides, made this remark:
"Copperdine, in liquid form, costs three
or four times as much as it ought to, and
as regards the proportions in which its use
is recommended, it is only one half or one



A CONVENIENT BARN.

plete, reliable combination mixture, com-
bining fungicidal and insecticidal prop-
erties, is yet to be found.

All that chemical science can do is to
help us in the proper preparation of the
mixtures. The best formulae for effective-
ness have to be found by practical tests.
No science can do that. So far we have
only located our game. The best guns
and the best ammunition to kill it with
have probably not yet been found. Ev-
erything here is yet indefinite, and in
process of development. There is no
doubt in my mind that our present mix-
tures will not stand long. Simpler, better,
cheaper, safer ones will be found. The
department of agriculture is now testing
twenty-five or more new fungicides, and
the next few years may revolutionize our
whole science of treating plant diseases.
This may be the last season for using the
Bordeaux mixture. In the end it will
have to go, no doubt, but in the mean-
time I propose to get along without the
inconvenient thing as much as possible.

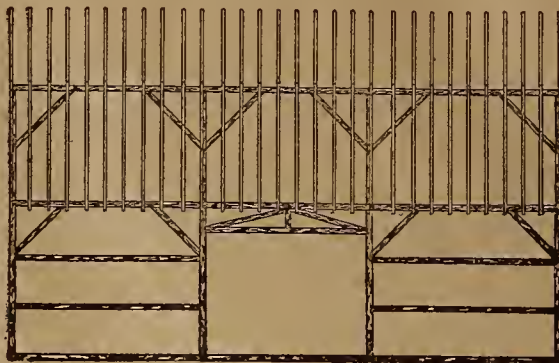
This reminds me that carbolic acid is
again spoken of as a remedy for grape
diseases. This is nothing new to me. It
was suggested, and the suggestion pub-
lished in the paper of which I was editor
at the time, as early as 1885 or 1886, even
before the true character of the grape
rot was generally known. Tests with this
substance are in order. But nobody can
know now what fungicides will stand in
the end.

It will not do to be too hasty, however.
Premature information given by the de-
partment and stations has resulted in
much mischief. A few years ago whole
plum and peach orchards were almost
ruined—at least, were terribly injured for
a time—by spraying with solutions of

third as strong as it should be." He also
maintained that the copperdine of 1891
could not have been effective, as not being
made in accordance with the official for-
mula. What nonsense is all this? I paid
Powell \$1.00 a gallon for it. In smaller
quantities I believe he asks \$1.50 a gallon.
Now if Prof. Van Slyke will show me a
place in Buffalo, or Niagara Falls, or in
ninety-nine out of 100 cities or villages
where I can buy twelve ounces of copper
carbonate and four quarts of liquid am-
monia, of twenty-six degrees strength, at
less than \$1.50, let alone at less than \$1.00,
I will thank him very much. According
to his figures, however, it should only
cost twenty-five cents or thirty cents.
The man apparently has not the faintest
idea of the value of these articles! Had
he once been going the rounds of a city,
from drug store to drug store, inquiring
for these articles and their prices, he
would know something about them, as
well as about the difficulty of finding car-
bonate of copper in local drug stores.

There was another difficulty. Dry car-
bonate of copper does not easily dissolve
in liquid ammonia, unless you use the
latter of great strength and in large quan-
tity. Even the purest sample, which I
received through a reputable New York
importer of chemicals, requires one pint
of ammonia (26°) to dissolve one ounce of
this drug. This was recognized in the
preparation of copperdine in 1891, and
consequently the manufacturer used
hydrated copper carbonate; that is, copper
carbonate moistened with water before
the ammonia is added. Because of this
deviation from the official formula, Prof.
Van Slyke thought the preparation could
not have been effective. Now Prof. Gallo-
way, for the coming season, recommends

this identical course of making the solu-
tion, namely: Five ounces of precipitated
carbonate of copper made into a stiff paste
by the addition of a little water, then dis-
solved in three pints of strong liquid am-
monia, and finally reduced to forty-five
gallons by adding water. If the carbonate
of copper does not all dissolve in the am-
monia, more of the latter should be added
(before the final dilution) until it is all



SIDE VIEW OF FRAME.

dissolved. This is somewhat indefinite,
and may require so much ammonia as to
make the whole mixture rather ex-
pensive.

But it is simply ridiculous to dispute
the effectiveness of a spraying mixture
on any such grounds. We do not know
what the next day may bring forth. Our
official formulae are changing from year
to year, and only practical tests can tell
whether they are good and efficacious or
not. Copperdine for 1892 is now made
after last year's official formula. A gallon
of it, however, may now be diluted to 110
or 120 gallons instead of eighty-eight, as
directed by the manufacturer, and will
then be all right.

A CONVENIENT BARN.

The accompanying cuts show a con-
venient and well-arranged barn, sufficient
for the needs of the ordinary farmer own-
ing eighty acres or more, which will be
easy to work in and not too expensive to
build.

The well-lighted basement is arranged
for horse and cow stables, together with
root cellars and a large space for the stor-
age of farm machinery, etc. The granary
is located on the first floor. The manner
of framing admits of the free and unob-
structed use of a horse hay-fork.

The plan can be easily modified to suit
special requirements. The design is taken
from "Artistic Dwellings," an entirely new
work of plans of Houses, Barns and Farm
Buildings, which we offer for sale or as a
premium upon another page.

PEANUT CULTIVATION.

BY E. M. THOMAS.

There is no crop cultivated in the
United States that has received less gen-
eral attention than the peanut, and no
crop produced, except tobacco, that has a
larger cash value per acre. It is, therefore,
obvious that experiments in its cultiva-
tion should be encouraged and produc-
tion extended.

At present but three states—Virginia,
North Carolina and Tennessee—grow pe-
anuts for commercial supply. This is sur-
prising, in view of the financial possibilities
to the producer. Climatic conditions are
favorable to its successful production over
a greater area of the United States than
has been heretofore thought possible.
All that is necessary, in regard to climate,
is a growing season of four or five months
without frost.

ORIGIN.

Authorities differ as to the origin of this
plant. Some claim it to have been intro-
duced into this country by vessels en-
gaged in the African slave trade, while
others hold, with seemingly good proof,
that it is of American origin. I believe it
to be now generally admitted that America
can reasonably claim the honor of having
been its birthplace. It is of little impor-
tance whether it originated in Europe,
Asia, Africa, North, Central or South
America, so long as it is not my purpose
to discuss its birth, but rather to present
to the readers of this article some of the
interesting and useful phases of its life.

SOIL AND FERTILIZERS BEST ADAPTED.

The soil best adapted to the growth of
this plant is a light, well-drained, sandy
soil containing a goodly quantity of lime.
If the soil is not naturally calcareous,
lime in some form—either the carbonate,
nitrate, sulphate or chloride—must be
added; it is a necessary constituent to
make the vines bear abundantly. Experi-

ence has taught that the carbonate is the best, but any one of the various forms will prove adequate. Barn-yard manure does not successfully take the place of lime. It causes a too luxuriant growth of the vine, thereby making cultivation more difficult, and does not assist materially in maturing the pods or attaining the yield that is possible by fertilizing with lime. Nothing but lime should be used. The cost is infinitesimal, and the increased product will result in an ample repayment of any expenditure in this direction. The quantity to be applied is governed by the depth of the soil and the amount of vegetable matter it contains. The application is increased with the greater depth of the soil; and the same rule is applicable as to the greater or less proportion of vegetable matter. It is, therefore, impossible to give any rule that could be universally applied. A safe plan is, in the beginning to make small applications, to be increased or diminished as the requirements of the soil are ascertained. I have no doubt but that any intelligent farmer, with the aid of this meager information, would be able the second season to fertilize properly.

SEED.

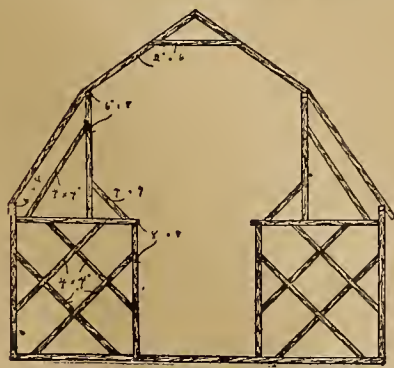
Too much care cannot be exercised in the selection of seed. This is an all-important matter. As the crop is from three and one half to five months maturing, it is imperative that you have reasonable assurance that the seed selected will germinate, thus minimizing the possibility of replanting. The latter should be avoided entirely if possible, as the result usually is that the replanted nuts do not contribute to the salable supply, but produce what are termed "pops" and "saps," or in other words, nuts that are practically worthless. This, of course, is due to insufficient time for maturing. Therefore, to make "assurance doubly sure," ample time should be given before the planting season arrives for the testing of seed. It is not exaggerating the importance of the seed-test to say that failure is invited, and accepts the invitation thus proffered, in nine out of every ten attempts, in cases where it is but indifferently done or omitted.

It is my opinion, endorsed by hundreds of peanut planters, that the best and simplest method for testing the seed is given by B. W. Jones, of Virginia, which I quote in full:

"Take a dozen or two kernels that appear to be in quality a fair average of the whole lot of seed on hand, place them in a tumbler with some dampened cotton or a piece of sponge, and set the tumbler in a warm place where the heat is uniform and high enough to start the germ in a few days. In a day or two, if the seeds are good, they will begin to swell and the embryo will soon begin to grow. Thus, according to the number of seeds that have germinated out of the number tested, the planter can calculate the probable percentage of good seed.

"But the planter must not rest satisfied with one trial. As soon as the out-of-door temperature will admit of it, he should try quite a number of the seeds in the open ground. Selecting a warm, sunny spot, he should plant from fifty to one hundred kernels, and shelter the place as much as possible from the cold winds. If these germinate well the seed may be relied upon as being good."

Great care should be taken not to disturb the kernel further than to remove the outer hull. This labor may be performed by children, who are usually de-



BENCHES EACH SIDE OF FLOOR.

lighted at the prospect of doing something useful, especially when the opportunity is thus afforded of gratifying a taste that is universal for this delicious nut.

The time of preparation of seed is important only in consideration of sufficient time being allowed for their thorough

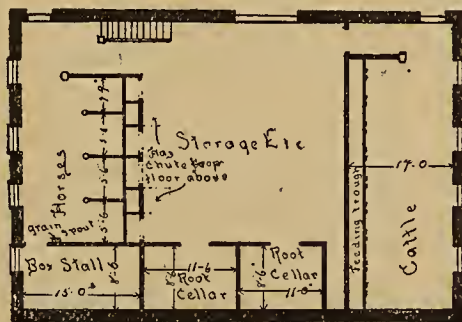
test. Two or three weeks will be ample time for that purpose. Should they have been prepared during leisure hours in the winter, especial care must then be taken that they do not "heat," thereby ruining their germinating quality. They should be put in a cool place, where it would be possible for a circulation of air to pass under as well as over them. In view of the constant watchfulness that is required, when prepared so long in advance of the planting season, it would be advisable to postpone this part of preliminary work until time for experiments will have arrived.

PREPARATION OF SOIL AND PLANTING.

The seed-bed must be as near perfection as labor and skill can make it. No other crop requires so much care in the preparation of the soil. The land must be entirely free from obstruction, so the small, delicate stems that bear the peas will meet no resistance in pushing their way through the earth. It is unnecessary to suggest that it is of the utmost importance that the soil be thoroughly harrowed before planting. It would be well to plow deep, early in the spring, and again with a light plow just before planting. By this method the soil attains a fine tilth and saves labor when the season is further advanced.

The nature of this plant resembles closely that of a sensitive child, in that it yields readily to kind treatment and proves a blessing (in the way of golden returns) when matured, but should it receive indifferent attention in its youth it will not grow up at all (in this respect the similitude diverges), either to worry or cause anxiety.

In consideration of the advantage to be derived by beginners in peanut culture, in having an opportunity to review the practical experience of two of the most



BASEMENT PLAN.

extensive cultivators of this commodity in Tennessee, and personally recognizing the value and weight it adds to this article, I present, by permission, the experience of Dr. W. L. Walker and Hon. S. G. Jones.

Dr. Walker says:

"For peanuts a light soil is best, a good deal of sand being no disadvantage to it. Heavy clay or limestone soils do not suit peanuts in this country. I use no fertilizers. None are used in Tennessee, so far as I have learned. Barn-yard manure makes too much vine, and the best fertilizer, in my opinion, is a good crop of clover preceding them.

"I break my ground well in the first part of the winter (clover land, however, I turn in the fall), using a two-horse turning-plow, and above all, breaking deep. I break again about the last of April, and pulverize the clods with a Thomas harrow, so as to have my land in fine tilth. I plant from the tenth to the twentieth of May, always in drills, which are about thirty inches apart, and plant every twenty inches in the row, putting two kernels to the hill. I use two bushels and a half (in the hull) of seed to the acre. This is a liberal allowance, but it is the best one to secure a stand. I lay off my ground with a bull-tongue just in front of the planters, and cover them with a small one-horse turning-plow, or with a double shovel, kept bright. A week after planting I run the plow on the other side of the drill so as to make a ridge; this is then 'blocked off,' and this gives the nuts a start of the weeds. The 'blocker' is made by fastening a bull-tongue stock to a piece of timber four and a half feet long, and this is used by dragging it over the tops of the rows; this gives room for the sprout of the pea to come out, and sweeps off the young grass."

Hon. S. G. Jones writes:

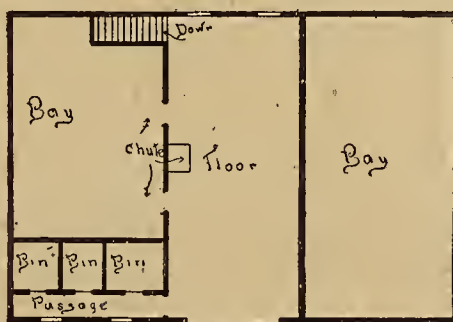
"If the land on which I intend to plant is stubble land, it is turned in the fall, and I let all my land lie in the spring until a full coat of grass and weeds comes up

on it, which is then turned over. If time will allow, I let another growth of green stuff come and turn again, harrowing after each of these plowings. In this way I kill many of the weeds that would annoy me throughout the season. I plant two bushels of white nuts to the acre, and three bushels of red nuts. This is equivalent to about twenty-eight and forty-two pounds, respectively, of shelled nuts. When I get ready to plant, which is generally from the twenty-fifth of April to the fifteenth of May (running sometimes, however, to as late as the tenth of June), I level the land with a harrow, and check the white nuts thirty-two inches each way. For red nuts, I lay off the rows thirty inches apart, and put one nut every six inches or two every thirteen inches, the latter giving more space for hoeing.

"In ordinary years, the bottom lands, with a small admixture of sand, make the best yield, both in quantity and quality, averaging about sixty bushels per acre. In wet years, however, the clay uplands make the best yield and brightest nuts."

The season for planting depends entirely upon the conditions of soil and climate. It is fatal to rapid, and in some instances to germination at all, to plant before the soil has become thoroughly warm and dry, as the peanut is more than sensitive to unfavorable conditions and is, therefore, liable to have its germination so arrested that it would seriously affect the final outcome. In the latitude in which Ohio, Indiana and Illinois are situated, planting can safely begin by May 20, as you are then reasonably sure of continued warm weather for a sufficient period to allow the vines to come to the surface, and should unfavorable weather then set in, no appreciable damage would be incurred.

In planting on rich soil ample space



FLOOR PLAN.

(say from twenty-five to thirty inches between the hills and rows) should be allowed for a luxuriant growth of the vine, as proper cultivation is rendered impossible when the vines interlock. On poor soil, twenty-two inches each way would be a sufficient allowance.

Replanting of this crop is very simple. In from ten to fifteen days, should the seed be good, the earth around the hills will begin to swell and crack, and when this does not occur in the time specified, replanting at once will be necessary, as it is a never-failing indication that the seed has not germinated.

The peanut, in embryo, is not without enemies—the most notable being field-mice, birds and squirrels. It requires the utmost vigilance on the part of the cultivator to prevent these depredators from entirely undoing his labors. Nothing has been discovered to be of more assistance in the eradication of these pests than a good shot-gun and a liberal supply of traps.

[Concluded in next issue.]

THE BARLETTA ONION.

In the April 1st number of the FARM AND FIRESIDE Joseph refers to the fact that the Ohio station recommends the Barletta onion for transplanting. He thinks that there must be some mistake, as the Barletta is too small for the purpose and is fit only for pickling.

If we have made any mistake in the matter it was in not stating explicitly enough for what purpose it was recommended. We did not state that it would take the place of White Victoria, nor Pritzaker, but its value consisted solely in its earliness.

This fact should have been made more prominent, since if Joseph has failed to see the point, no doubt others have also, and some may have been misled.

It is so early that it may be bunched and sold almost, if not quite, as soon as onions grown from sets. Of course, it is not an ideal bunching onion, as the neck is not stiff enough, but it goes off readily when about an inch in diameter, and those that are left to ripen attain a diameter of two to three inches. Ripening so early and having a fine appearance and good quality, the Barletta has with us always been very profitable. It comes in ahead of

any other variety by several weeks, and has no competition in the market. We usually receive two or three times the price for Barletta that we do for other varieties. Another thing in its favor is that it comes so early that the ground can be cleared for some other crop, which is no small consideration. In view of these facts we think that Barletta has a place, and can be recommended for transplanting. Of course, it should be planted to a limited extent only, and not at all by those who are not so situated as to be able to reap the benefits derived from its early maturity. In this market it pays as well as any variety we can grow, but it would not in all. Everyone must use his own judgment about such matters.

It is now too late to sow onions for transplanting, but judging from the inquiries received almost daily I infer that both Joseph and the Ohio station have not been careful enough to emphasize the fact that to succeed in transplanting onions they must be transplanted into the open ground about as early as the soil and weather will admit. For this latitude the middle of February is as late as we ought to sow the seed, and the middle of April as late as we ought to transplant. Every day later than these dates, for doing the work, decreases the chance of success very fast. To meet with the best results we must be about two weeks ahead of the above dates. A safe rule is to transplant as early as soil and weather will admit, and give the plants six or eight weeks' time in the hotbeds and cold-frames before transplanting. The importance of early planting should be kept in view by those who expect to try the method next season.

If our experiments give the same result this season as in the past, we shall be able to say that it pays to transplant Yellow Danvers.

In this latitude, upon upland soils, our greatest difficulty is to get a good stand, and we can always accomplish this by transplanting.

I am of the opinion that transplanted onions will bring a better price this year than others—and indeed such is usually the case—but the acreage of onions sown will be uncommonly large, and those that come into the market late may go begging for buyers. If onions are not sold for twenty-five cents per bushel next winter, it will be because of a poor crop. Some one is likely to lose money on onions this year.

W. J. GREEN.

Ohio Experiment Station.



Mrs. Anna Sutherland
of Kalamazoo, Mich.

Hood's Conquers All

Forms of
Scrofula and Impure Blood

Even the obstinate Goitre, or swelling in the neck, as well as dreadful running sores, yield to its great blood-cleansing and strength-giving powers. What could be more remarkable than the cure of Goitre of

40 Years Standing

as described in the statement below:

"I had goitre, or swellings in the neck since I was ten years old; am now fifty-two. I used Hood's Sarsaparilla recently and the swelling has entirely disappeared. It has been very troublesome. When I began I was feeling so discouraged with the goitre and rheumatism I felt that I would

As Soon be Dead

as alive. Whenever I caught cold I could not walk two blocks without fainting. Now I am free from it all and I can truly recommend Hood's Sarsaparilla to any one. I received a letter from Mrs. Jennie Bigelow, now of Fremont, Mich., asking if my testimonial as above in behalf of Hood's Sarsaparilla, was true; I at once wrote her that it was, and sent particulars of the benefit the medicine did me. I have since received a letter from her thanking me very much for recommending

Hood's Sarsaparilla

and stating that she also took it and was entirely cured. MRS. ANNA SUTHERLAND, 406 Lovel Street, Kalamazoo, Michigan.

Hood's PILLS act easily, yet promptly and efficiently on the liver and bowels.

Our Farm.

HOME GARDEN NOTES.

BY JOSEPH.

GARDEN-MARKER.—I have spoken of devices for marking the garden once before. The old-fashioned kind, which one has to pull over the ground, is not satisfactory. If one wants to see what one is doing with one of them, it is necessary to go backward, like a river-crab; with a marker that is to be pushed, the operator can keep the direction much easier, and see whether he makes straight marks or crooked ones.

The roller-marker is all right. Any light garden-roller will do, even if made rather roughly out of a piece of oak or chestnut log, say three feet long and a foot or so in diameter. Stretch a clothes-line across (or better, two, to make two marks at once), and then roll the roller along over them. This makes good marks for setting plants, etc., and you can make them perfectly straight in this manner, a task not quite so easy with the ordinary marker. Still, it will do well enough if pieces of rope are fastened around the roller, the required distance apart, one for each mark.

Two more styles of push-markers are here illustrated. The simplest of these, and most quickly made, is shown in Fig. 1. Take three pieces of board, say fifteen inches long, rounded off sleigh-runner fashion; have them the proper distance apart, nail a piece across the top on the straight side, and fasten a handle as shown. This is easily pushed ahead, and will make a good mark.

A barrow-marker is shown in Fig. 2. The illustration makes an explanation unnecessary. Have the teeth slanting slightly backward.

One great advantage of the roller-marker is that you can make cross marks at the same time. Simply nail pieces of rope or clothes-line at the desired distances lengthwise of the roller, between the pieces fastened around the roller. The roller thus arranged is shown in Fig. 3.

GARDEN GOSSIP.

TOMATOES FOR CANNING, ETC.—To get a supply of luscious, ripe tomatoes for home use at a time when we most appreciate them (namely, early), we must plant early and take a little risk of late frosts; for in case of necessity, we can easily cover up the few plants in the kitchen garden. But when growing on a large scale for market or for canning factories, we cannot afford to take such risks, but must wait until danger from that source is all past. This is not until June 1st in this section; but whatever this time is for any given locality, don't wait any longer.

Set your plants—and they ought to be good, strong ones, too—as soon as you can safely do so. If you have been a believer in rather poor soil for tomatoes, for once try a rich piece of ground, or at least a good coat of manure, and if this is from the stables, and consequently not well provided with phosphoric acid, use in addition to it a good dose of bone-meal or acid phosphate or phosphate meal, or leached wood ashes, or any other phosphatic manure. Feed your plants well, and get a good crop for once. But it is absolutely necessary, when setting tomatoes on well-enriched soil, to give each plant plenty of room.

Select the Matchless or Ignatum, or one of the several sorts that resemble these very closely, and set them not less than five feet apart each way. If the plants have

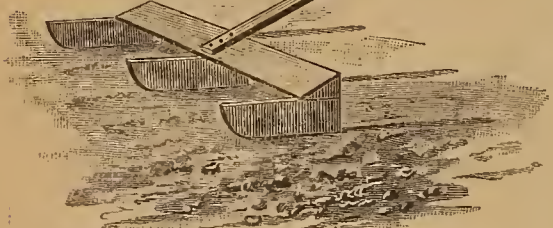


FIG. 1.

only few roots, set them well down into the ground. With good plants of good varieties, set far enough apart in good, warm soil and exposure, it is an easy thing to raise good crops of tomatoes.

NITRATE OF SODA.—I have a number of inquiries about nitrate of soda before me. Although I think highly of this salt for manurial purposes, it is nevertheless true

Farm and Fireside Directory

FARM IMPLEMENTS, MACHINERY, ETC.

This Directory will be found very useful to those who want any kind of farm implements, machinery or vehicles, and our readers will find it to their interest to write to the firms named for catalogues and information before deciding what to buy.

Always mention the Directory when writing to those whose names appear in it, for Farm and Fireside subscribers will secure special attention from them.

We aim to give in this Directory the addresses of reliable manufacturers and dealers in articles that are wanted by farmers and country people. All of these firms are well known to us, and we do business with many of them. So great is our confidence in them that we guarantee to return to our subscribers any money that may be lost by trusting any one whose name appears in this Directory, who turns out to be a deliberate swindler.

This offer is to actual subscribers only, and is a positive guarantee to make good any loss occasioned by swindlers.

BARB WIRE.

Kelly Barb Wire Co., Chicago, Ill.
Buck Thorn Fence Co., Trenton, N. J.

BINDERS, REAPERS AND MOWERS.

William Deering & Co., Chicago, Ill.
Johnston Harvester Co., Batavia, N. Y.

BUGGIES AND CARRIAGES.

Studebaker Bros. Mfg. Co., South Bend, Ind.
Bradley & Co., Syracuse, N. Y.

CORN PLANTERS.

The Farmers Friend Mfg. Co., Dayton, Ohio.
Keystone Mfg. Co., Sterling, Ill.

COTTON GINS.

Daniel Pratt Gin Co., Prattville, Ala.
New Orleans Machinery Co., Ltd., New Orleans, La.

CULTIVATORS.

P. P. Mast & Co., Springfield, Ohio.
The Long & Allstatter Co., Hamilton, Ohio.

DISC HARROWS.

Stoddard Manufacturing Co., Dayton, Ohio.

ENGINES.

Armstrong Bros., Springfield, Ohio.
The Huber Manufacturing Co., Marion, Ohio.
Wood, Taber & Morse, Eaton, N. Y.

EVAPORATORS.

Blymyer Iron Works Co., Cincinnati, Ohio.

EVAPORATORS FOR MAPLE AND SORGHUM.

The G. H. Grimm Mfg. Co., Montreal, Que., & Rutland, Vt.

FARM WAGONS.

South Bend Wagon Co., South Bend, Indiana.

FEED CUTTERS.

Stover Manufacturing Co., Freeport, Ill.
Whitman Agricultural Co., St. Louis, Mo.

FENCE MACHINES.

Richmond Check Rower Co., Richmond, Ind.
Lansing Wheelbarrow Co., Lansing, Mich.

FERTILIZER DISTRIBUTORS.

Kemp & Burpee, Syracuse, N. Y.

GARDEN IMPLEMENTS.

S. L. Allen & Co., Philadelphia, Pa.

GRAIN DRILLS, Etc.

Bickford & Huffman, Macedon, N. Y.

that I would probably get along without it if I were very far from a source of supply. For use in the home garden it is required only in small quantities, a hundred pounds of it going a good way. As it comes from abroad, and has to be shipped from the seashore, it will be rather costly for people living far inland, unless a number of them combine and have a larger quantity shipped.

But it is not a complete manure, and should be used only as a supplement to other manures. Stable compost is yet the chief reliance for garden purposes; but less of it can be used if small doses of nitrate of soda are used in early spring for early crops, such as onions, beets, lettuce, radishes, early cabbage, celery plants, spinach, etc. Put on a few hundred pounds per

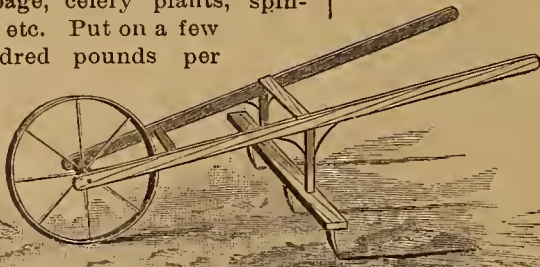


FIG. 2.

acre, at the time of sowing the seed or soon after. If you don't have it, use other manures a little more freely. Good poultry manure, applied freely as a top-dressing and harrowed in, will do about as well, and sometimes even better. The trouble is, we do not usually have enough of it. For celery and cabbage plants I always use either plenty of poultry

manure, nitrate of soda, or even nitrate of potash (ordinary saltpeter). Of course, the latter costs high, but not more than a few pounds are required for the small plant-bed in any home garden. Nitrate of soda costs about \$2.50 per hundred pounds at the seaport. Any large dealer in fertilizers can furnish it.

CELERY GROWING.—Have you neglected to sow your celery as early as you should have done; namely, as soon as the ground can be prepared in spring; or, for very early, in February under glass? If so, and you have a chance to get some of the "thinnings" from a neighbor friend or plantsman, by all means



get them. Plant them out in rows, far enough apart for ease in keeping the ground well cultivated, and about two inches apart in the rows. This will give you fine, stocky plants by the time you will want them, much better ones, indeed, than you will most likely be able to buy. Use White Plume for early, and Giant Pascal for main crop.

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

CORRESPONDENCE.

RUSSIAN APRICOTS.—Undoubtedly a great error has been made in growing Russian apricots. So far as I have been able to learn, and from observation through the New England, southern and middle states, this valuable fruit has been budded or grafted on peach, while I am satisfied that they should have been on plum stocks. Nearly all those sold and on peach stocks die after a short time, varying about like the peach-tree. The Mennonites who brought this fruit with them, settling in Kansas and Nebraska, have, I am told, suffered no such condition, and the trouble, seemingly, can be attributed to the nurserymen, who were evidently too anxious to place this stock on the market without first testing it and finding out what was desirable to bud on. I hope to see it fully developed, and I feel sure that when once properly done, will prove one of our most valuable fruits.

Suspension Bridge, N. Y.

E. B. C.

INQUIRIES ANSWERED.

BY SAMUEL B. GREEN.

Tankage.—L. L. Greensburg, Ind. Tankage is a very excellent fertilizer for strawberry beds, either new or old. Should prefer to apply it after land is dry and then harrow it in.

Best Soil for Gooseberry and Currant Bushes—Self-blanching Celery.—M. F. W., Lincoln county, N. M. Currant and gooseberry bushes do best in a moist (not wet), rich loam. The blackberry prefers a somewhat drier but a good soil—Self-blanching celery will be white, even if not earthed up, but the quality is greatly improved by the earthing-up process.

Best Fertilizer for Fruit-trees.—J. N. G., Tacoma, Wash. I should prefer to use some good stable manure; but ground bone would be good, and so would fish refuse. In a new country, such as you are in, there is not generally any need of buying fertilizers, as there are so many sources of manures close at hand. Then, again, I am not familiar with what success has followed the use of special fertilizers in your state. You may find that you get good results from the use of wood ashes. Animal manures, I am very sure, will give you good results.

Grafting.—H. L. W., Mayville, Wis. The nurserymen graft their apples mostly in the winter. They sow seed in the spring; take up the young plants in the fall and store in a cold cellar. They also store away a lot of scions. In the winter they graft the scions onto the roots of the young seedlings and store them away after grafting and plant out in the spring. It is a very simple process when once understood, and skillful workmen will graft as many as 2,000, sometimes, in a single day with the help of a boy, who puts on the wax. The principle is the same as in any kind of grafting.

Grapes.—R. M., Hamlin, Ky., writes: "I have a lot of ground which I think admirably adapted to grape culture. (1) What varieties of grapes are best for wine in this vicinity? (2) How many pounds of grapes will a vine produce in full bearing? (3) How many pounds of grapes will it require to make a gallon of wine? (4) How old is a vine before it comes to a full bearing?"

REPLY.—(1) Norton's Virginia and Cynthiana for red wine, and Delaware and Elvira for white wine. (2) It varies so much according to varieties, cultivation, location, pruning, etc., that it is quite impossible to give you a very definite answer. Of the kinds mentioned, when grown under ordinary vineyard management, probably twenty pounds per vine would be a heavy crop for any of them, while the Delaware might not yield half so much. (3) It depends very much on the process used in wine-making and whether sugar-water is added. Of pure grape juice, I should think it would require about twelve pounds of Elvira for a gallon of juice. (4) Vines generally commence to bear a little the second year after planting, and give a full crop the third or fourth year.

Blueberries.—W. W., La Crosse, Wis., writes: "(1) Can blueberries be cultivated? (2) If so, should the plants be raised from seed or taken from the fields? (3) Do they grow easily from seed?"

REPLY.—(1) Yes, to a limited extent. (2) The most practical form that blueberry cultivation has ever taken has been when they have been improved on the land on which they have grown naturally. This should consist in cutting out the useless brush and allowing the blueberries all the freedom possible. I have never been very successful in moving the plants from the fields to the nursery. Very often they will live for many years, but I have never fruited them to amount to anything. Yet, during a visit some two years ago to Arnold Arboretum, I saw some species (among them *Vaccinium corymbosum*) which were full of fruit. In the frames there were several hundred small seedling plants. (3) The seed will not germinate readily unless specially treated. The berries should be gathered and crushed when ripe. This crushed mass should

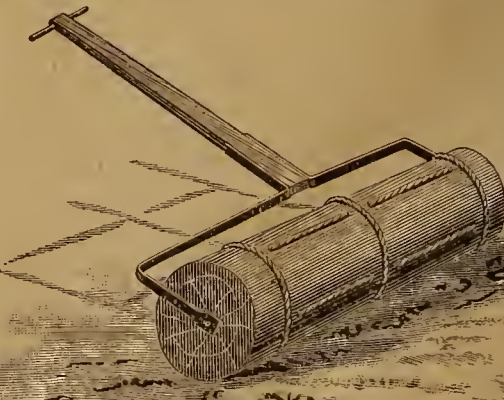


FIG. 3.

be allowed to ferment for at least a month, and then the seeds ought to be cleaned from the pulp and sown in boxes, and placed where they will be somewhat protected from drying out, but where they will freeze hard. My practice has been to put them in the greenhouse in February, and they have germinated in about six weeks. The young seedlings are delicate, and must be carefully cared for the first year. I think the reason in this case why the fermentation is good for the seeds is that they need some treatment to bring about the changes which they naturally receive when eaten by animals.

EXTRACTS FROM CORRESPONDENCE.

FROM ILLINOIS.—Carroll county is one of the best farming counties in the state. For good water and immense crops it cannot be beaten. Corn last season yielded from 40 to 60 bushels per acre; oats, 50 to 90; rye, 18 to 30; wheat and barley yielded well. All kinds of vegetables grow to perfection. We have good railroad facilities. We have good schools. Farm hands are scarce and wages high. Good, steady hands could find ready employment here at good wages. S. P. M.
Hill, Ill.

FROM WASHINGTON.—I have been a citizen of Lewis county for several years, and am well satisfied with this country as a home. We have mild, open winters. My stock has lived out on the range all winter and are looking well. Grain, grass and vegetables do well here, and as a fruit land it cannot be surpassed. Berries bring \$600 to \$1,000 per acre. Good fruit land can be bought at reasonable rates. Wheat is worth \$1 per bushel; oats, 40 to 60 cents; potatoes, 40 cents; eggs, 20 cents per dozen. B. P. B.
Napavine, Wash.

FROM KANSAS.—Montgomery county is in the first tier of counties next to the territory and third county from the east line. We had too much rain last May and June, and then no more rain till October. Our corn crop was poor, but wheat, oats and flax were good. Wheat is 75 cents a bushel; corn, 35 to 40; oats, 30 to 40; fat hogs, 4 cents per pound; hay, \$4 a ton. Wheat looks well for the chance it has had. It was sowed very late. We have had more rain this spring than we have had for years. T. F. K.
Independence, Kan.

FROM VIRGINIA.—We are about fifty miles south-west from Washington. We have a nice country, not too hilly or too level, with a spring in almost every field. The land was all run down during the war, and considerable of it is in briars and brush yet, but it crops well and is easy to cultivate and improve. Fall wheat looks fine. We came here from Illinois and are well satisfied. Land sells at from \$4 to \$60 per acre. The markets are good. People from the North and West are generally well pleased. B. B. S.
Midland, Va.

FROM NEBRASKA.—Custer county is situated in the center of Nebraska. The largest part is rough hill land unfit for farming. The valleys of Clear creek, Muddy creek and part of the Soup river are very good farming lands. The soil is very rich, raising large crops of corn, wheat, oats, potatoes, hay and all kinds of garden truck. Last year corn averaged about 40, wheat 20, oats 35 bushels per acre. Wheat is worth 53, oats 23 and corn 23 cents per bushel. The drawbacks are long, cold winters, no timber, long distance from market, low prices for grain and stock. Fruit does not do well. Coal and things we have to buy are dear. A. C. H.
Westerville, Neb.

FROM WASHINGTON.—Skagit county is one of the best counties in the state. Our climate is mild winter and summer. Part of the county is adapted to wheat, oats, potatoes, hay and all kinds of vegetables and fruits. A span of horses is worth from \$250 to \$500; cows, \$35 to \$60; sheep, \$4 to \$5 per head. Farm hands get \$25 to \$35 a month; lumbermen, \$35 to \$70; sawmill hands, \$25 to \$30. Land ranges from \$5 to \$200. There is some government land yet, but the best is gone. We have good markets for all produce. Seattle is our main shipping point. We can ship by rail or boat. We have good schools and churches. There are many kinds of game here, such as elk, deer, mountain sheep, bears, ducks, wild geese, etc. F. S.
Fir, Wash.

FROM NEBRASKA.—Box Butte county is in the north-western part of Nebraska. It has been settled for the past six years. It is a good stock country; grass and water are in abundance. There are many small lakes formed by springs, and wells are shallow (except on tablelands). It is a fine country for potatoes and garden truck; all sorts of vegetables grow to an enormous size here. Hay is generally worth from one to two dollars per ton, but there is no sale now at all as the winter has been so open that stock could graze nearly all the time, and the markets are full of baled hay. This is quite a wheat country. Fair crops were raised last year. Every piece of plowed ground is being farmed this year. There is some government land left, and relinquishments can be bought. There are good homes here for poor folks and those who have to rent in the East. A good creamery or cheese factory would do well here, as there are none in the county. J. E. H.

FROM OREGON.—Illinois valley is nearly level, surrounded by rolling foot-hills. There is no prairie. The land is covered with timber or brush, or both. The foot-hills are the ideal fruit lands, being well drained and less subject to late spring frost than the valleys. The valley is watered by the Illinois river, Sucker and Althouse creeks, and numerous small streams. The water is excellent. Taking one year with another I think that we have as fine a climate as there is on earth. I am an enthusiastic horticulturist, and am well satisfied with this country; but that is not saying that it will suit everyone. What suits me may not suit another at all. Any one intending to come to Oregon should have money enough to live on for a couple of years, as it is up-hill work to start on nothing, here as any where else. Bacon is worth 12½ cents per pound; wheat, 80, and oats, 50 cents a bushel; flour, \$2.50 to \$3 per hundred pounds; hay, \$6 to \$10 per ton. E. F. M.
Kerbeyville, Oregon.

FROM NEBRASKA.—I live in south-western Nebraska, on the Frenchman river, in Chase county. I have lived here six years, having settled on government land in April, 1886. We have a very productive soil and a healthy climate. We failed on a crop in 1890, but the splendid crop of 1891 set the farmers on their feet again. Wheat made from 15 to 35 bushels to the acre; rye, 20 to 40; oats, 40 to 70; barley, 25 to 60, and corn, 30 to 50. There are many fine water-powers on the Frenchman river, two of which are used for running flouring mills. There will be an immense acreage of wheat sown this spring, and the present prospects are very favorable for a good crop, the ground being in splendid condition, owing to the heavy fall of snow. The government land is all taken, but there is plenty of land for sale by parties who secured more than they needed under the homestead, pre-emption and timber culture laws. Prices range from \$5 to \$12 per acre. This is also a good stock country, but the cattle need shelter during storms. The old ranch system formerly in vogue here of letting the cattle "rustle" is played out. Our present prices for farm products are, wheat 55, oats 30, rye 50, barley 30, corn 22 and potatoes 25 cents per bushel, butter 12 cents per pound, eggs 8 cents per dozen, hay \$5 per ton, fat hogs \$3.50 per hundred pounds. E. B. W.
Champion, Neb.

In a few weeks we will deliver the picture, "Columbus at the Royal Court of Spain," to our many friends who have sent us their order. The picture will aid in beautifying every home into which it goes, and has a greater value than many pictures, for it records a historical event of absorbing interest to every American.

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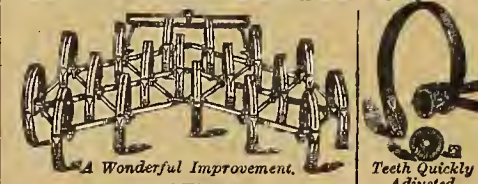


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Our Fireside.

THE WATCHES OF THE NIGHT.

Oh, the waiting in the watches of the night!
In the darkness, desolation, and contrition, and
affright;
The awful hush that holds us shut away from all de-
light,
The ever weary fancy that forever weary goes
Recounting ever over every aching loss it knows—
The ever weary eyelids gasping ever for repose—
In the dreary weary watches of the night!

Dark—stifling dark—the watches of the night!
With tingling nerves at tension, how the blackness
flashes white
With spectral visitations smitten past the inner
sight!—
What shuddering sense of wrongs we've wrought
That may not be redressed—
Of tears we did not brush away—of lips we left
unpressed,
And bands that we let fall, with all their loyalty
unguessed,
Ah! the empty, empty watches of the night.

What solace in the watches of the night?—
What frailest staff of hope to stay—what faintest
shaft of light?
Do we dream and dare believe it, that by never weight
of right
Of our own poor weak deservings, we shall win
the dawn at last—
Our famished souls find freedom from this pen-
ance for the past,
In the faith that leaps and lightens from the
gloom that flees aghast—
Shall we survive the watches of the night?

One leads us through the watches of the night—
By the ceaseless intercession of our loved ones lost to
sight,
He is with us through all trials, in His mercy and His
might—
With our mothers there about Him, all our sorrow
disappears,
Till the silence of our sobbing is the prayer our
Master hears,
And His hand is laid upon us with the tenderness
of tears
In the waning of the watches of the night.

—James Whitcomb Riley.

A SENSIBLE HUSBAND.

My wife cannot cook, though she studies a book
Of recipes, day after day;
But what do I care? She is charming and fair,
And as sweet as the blossoms of May.

She tries all her might, but her bread isn't light,
For she never can get it to rise;
But then you should see, as she breakfasts with me,
The light that illumines her eyes.

No skill can she boast in preparing a roast,
And in pies her successes are few;
And ill she fares, when soup she prepares,
For she's sure to get into a stew.

But no fault do I find, for she's loving and kind,
And when bachelorship I forsook,
'Twas to wed a sweet wife, a companion for life—
It wasn't to marry a cook.

—N. Y. Press.

MISS LYDDY'S WEDDING-GOWN.

Oh, missus, missus! Somefin's done
happened!"

Blank horror and dismay were
depicted upon the face of my
small African, as she stood upon
my threshold with upraised hands
and eyeballs that seemed start-
ing from their sockets. Her
pause was one of preparation, for, with the
innate consideration of her race, she sought
to break the news gently to me, but the
burden of it was too great for her, and with
the next breath she exclaimed:

"Dem pigs done chawed up Miss Lyddy's
weddin'-gown!"

"Glory," I exclaimed (she had been piously
christened Gloriana), "Glory, how did it hap-
pen?"

"Dunno!" said Glory. "'Pears to me dem
pigs has got Satan in 'em. Guess dey's scend-
ed from de ole lot what run down a steep
place later de sea. I'll go and fetch ye a
piece."

She sped out, and instantly returned with a
tattered shred of India mull, that had once
been white, and still bore some resemblance to
a gown. Poor Miss Lyddy! This was all that
remained of her dream of wedding splendors.
It was too pitiful! I felt at once that the
bonds of good neighborhood had been irre-
trievably broken, and that Major Hawthorne
must be made aware of this last and worst
degradation of his unseemly pigs.

But who would break the news to Miss
Lyddy?

"Glory," said I, "where is she?"

"Gone over to de buryin'-place to tend to de
ancestors," answered Glory.

Poor, faithful soul, even in those last days of
her maidenhood, with the vague terrors of
matrimony, and the still more appalling re-
sponsibilities of unsaved heathen souls hang-
ing over her, she did not forget the ancestors.
Long lines of Ludkinses lay buried in little
sunken hillocks in the family burying-place,
which lay just in sight of her sitting-room
window. She herself was the last of her race,
and until within three weeks it had seemed
that the only fate which awaited her was to
live out her little space under the ancestral
roof-tree, and then take her place in the silent
ranks of those who had gone before. But a
change had come. It came in the person of
a returned missionary from the Micronesian
islands, who had buried the first and second
partners of his joys and sorrows somewhere
under the palm-trees of those tropical lands,
and had come back to the scenes of his youth

to recruit his health, to serve the cause, and look
up partner number three. He met Miss
Lyddy at a woman's missionary meeting. He
called the next afternoon, and was invited to
stay to tea. He accepted the invitation, and
the next morning Miss Lyddy came into my
room—for I, too, domiciled under the Lud-
kins' roof-tree, for a consideration—and with
much hesitation and many faint and delicate
blushes informed me that she had promised
to share the future lot of the Rev. Nehemiah
Applebloom, to take care of his six children,
and sustain and support him in his arduous
labors among the heathen of the Micronesian
islands.

I was struck dumb with amazement. "Miss
Lyddy," I said at length, "have you duly con-
sidered this project?"

Her thin figure quivered, and her white
face, that had yet a delicate remembrance of
youth in it, grew tender with feeling.

"Yes," she said, "I think I have. I have al-
ways had a presentiment that I should marry
a minister or a missionary." Admirable and
pathetic faith! "And Mr. Applebloom says
he knew the moment he set eyes upon me
that I was ordained to be his wife; so you see
it is not the surprise to either of us that it is
likely to be to our friends."

I knew then that her mind was fully made
up, so I demurred no longer, but lent myself
at once to a discussion of the wedding, which
I plainly saw was what Miss Lyddy desired of
me.

"You will be married in church, I suppose?"

"Oh, no," said Miss Lyddy, with gentle de-
cision. "I am the last of the Ludkinses. All
the Ludkinses have been married at home.
I will go out from under my own roof-tree.
If I must seem to forsake the ancestors"—she
paused to regulate a little choking in her
throat—"I will at least not forsake their tra-
ditions. I shall leave a little money with the
parish clerk, that he may see that the graves
of my dead are kept in proper order, as I al-
ways have loved to keep them, and I hope
they will forgive my departure; but I will at
least go as a Ludkins should. It is my desire
to be married in my grandmother's wedding-
gown."

Miss Lyddy's voice trembled, and there was
a humidity in her eyes, at which I did not
wonder, for it was much like a funeral, after
all.

"I thought, perhaps," went on Miss Lyddy,
"if I brought the venerated relic to you, you
would tell me if anything were necessary to
be done to fit it to me. I don't care for the
fashions, you know, and my grandmother, as
I remember her, was about my height, but
still, you know, something—some changes
might be advisable."

"Certainly," I said, "do bring it to me. I
should so like to see it."

"It is sprayed India (she called it Ingy) mull.
My grandfather, Captain Simon Ludkins,
brought it home from over the seas. I'll
bring it."

Like some pale and gentle ghost, she rose
then and went to a bureau drawer, and un-
rolled from folds of linen that smelt of laven-
der, the fair, frail relic of Mrs. Captain Simon
Ludkins' wedding state. It was fine em-
broidered mull, the undoubted product of
India looms.

"It is lovely," I said, "and so well kept that
it will be just the thing for you. Will you try
it on? We can tell then just what it needs."

Miss Lyddy proceeded to disrobe herself,
and put on the spider-net gown. As she did
so, the changes in fashion's mandates became
only too evident. It had no waist to speak of
and just a little lace-trimmed puff for sleeves.
Miss Lyddy was evidently surprised. She had
not thought of this. I knew well what the
troubled look upon her face meant, and I pitied
her maiden sensibilities. Could it be possible
that her grandmother, Mrs. Captain Simon
Ludkins, had ever worn such a gown as this?
She said not a word that could indicate the
depth of her mortification, but her face was a
study for an artist.

"There must be sleeves," she murmured,
after a few moments of silent and embar-
rassed contemplation.

"Yes," I replied, cheerfully as my con-
strained gravity would allow. "And you
might have a fichu, and a founce on the hot-
tom."

She looked down. She had not before
realized that the skirt of the venerated relic
lacked a full quarter of a yard of touching the
floor.

"However could they!" she ejaculated in an
undertone. But she quickly recovered herself,
and looked up to me cheerfully over her spec-
tales.

"How ingenious you are!" she said, with an
air of sweet relief. "I knew you would help
me out."

We went out together and bought the
requisite mull that day, but when we came to
put it beside the "venerated relic" of Mrs.
Captain Ludkins, it was evident that time
had so enriched the color of the latter that
the two were most unfortunately unlike.

"We can lay it out on the grass," I said;
"these June dews are just the thing for it, and
as it will be evening nobody will in the least
notice."

Again Miss Lyddy smiled gratefully, and
declared that my suggestion should be carried
out in the most faithful manner.

The Rev. Nehemiah Applebloom—"A lovely
name, don't you think so?" said Miss Lyddy,
and she blushed and smiled like a school-girl

in her teens—had but a short furlough, and
the marriage was to transpire the next week,
so the relic was put out to bleach forthwith.
It had already been upon the grass three days
and nights, and been religiously watered by
Miss Lyddy at morn and noon and dewy
eve, and the next day it was to be taken up
early and put into the dressmaker's bands for
the necessary alterations, when the dreadful
event occurred with which this narrative
opens.

"Glory," I said, "do you keep watch for Miss
Lyddy when she returns. Say nothing about
what has happened unless she misses the
gown from the grass. In that case tell her
that I thought it was bleached enough, and
took it up to dry, and you don't know where
I have put it. I am going out now, but if
she asks where, tell her you don't know."

Glory was faithful, and had, besides, the
natural craft of her race, and I knew that she
could be trusted. As for me, I swiftly donned
my bonnet and set out to find Major Haw-
thorne. It was a bright June evening, and my
walk through the meadow and the grove that
skirted Hawthorneau would have been a de-
lightful one if I had borne a mind more at
ease. The Major was a gentleman by birth,
but he had lived out his fifty bachelor years
in a gay and careless way, that had seemed to
set the gentler part of creation at defiance.
In the lifetime of his parents, Hawthorneau
had been a beautiful estate. It still retained
many marks of wealthy and cultivated owner-
ship, but it was sadly run down, as the home
of a bachelor is apt to be. The grove, which
had once been the pride of the place, was
grown up to brush now, and the sere leaves of
many summers' growth rustled under my
feet as I walked through it. At one point,
coming suddenly around a thick clump of
undergrowth, I heard a chorus of tiny snorts,
and the scampering of numberless hoofs, and
knew that I had invaded a haunt of the Ma-
jor's last agricultural freak, the very brood of
Berkshire pigs that were the source of all my
borrowed woes. Away they scampered, their
snouts well raised in air, and each with a curl
in its tail, that seemed too ornamental to be
wholly the product of nature, and to justify
the village rumor, that the Major's own man
put those tails in curling papers every night.
They had the air of spoiled children, every
one, and were evidently the Major's pets. But
that didn't matter; they had ruined Miss
Lyddy's wedding-gown, to say nothing of a
dozen other aggravating exploits which do
not belong to this story, and I was determined
to have satisfaction out of their owner.

I found the Major sitting on his piazza, with
an after-dinner look upon his handsome,
good-humored face. He rose to greet me with
an air of old-school politeness, dashed with a
faint wonder that I, a woman, should have
had the hardihood to approach a place so
little frequented by women.

"Good evening, Miss Grace. I am happy to
see you. In what can I have the honor to
serve you?"

He had read my face, and knew that I had
come on a mission.

"Major Hawthorne," I said, paying no atten-
tion to his offer of a chair, "I have come on a
very painful errand."

"Sit down, madam," said the Major, polite-
ly. "I cannot possibly permit a lady to stand
on my piazza. I ought, perhaps, to ask you
to walk in, but it is rather stuffy indoors this
evening."

"No," I said, "I will sit here, if you please."
To tell the truth, indoors, as seen through the
window, had not the most inviting look, and
I was glad to compromise.

"You have, no doubt, heard"—plunging in
medias res—"that Miss Lyddy Ludkins is about
to be married."

"Married! Miss Lyddy! No! Hadn't heard
a word of it," said the Major in genuine
amazement. "Who is the fortunate man, pray?"

"The Rev. Nehemiah Applebloom, a mis-
sionary to the Micronesian islands, who has
come home to recruit his health and find a
wife."

"I know him," said the Major. "Saw him
down at the station—a long, lean, lank indi-
vidual—just fit for his vocation; no tempta-
tion whatever to cannibals! But what the
deuce is he going to do with Miss Lyddy?
What will Balaam's Corners do without
her?"

"Balaam's Corners must do the best it can,"
I said—I fear a little sharply, for my mind
was still in a most aggressive state towards
the Major.

"They are to be married next week, and—"
"What will become of the ancestors?" in-
terpolated the Major, in whom surprise
seemed to have gotten the better of habitual
politeness.

"Oh, she has made arrangements with Mr.
Crow about that."

"Just like her! Dear, faithful girl."
The Major had all his life loved all the sex—
not one—and I was not to be beguiled by this
show of feeling.

"She had set her heart upon being married
in her grandmother's wedding-gown."

"Old Mrs. Captain Simon? I remember her
well. A mighty fine woman. She never
would have gone to the ends of the earth with
a missionary. It's the craziest scheme I ever
heard of."

I began to fear I should never get to my
errand.

"It was put out on the grass to bleach, being

a little yellow with age. It was a lovely em-
broidered India muslin that the old Captain
brought home from India himself."

"How well I remember him in my boyhood!
A jolly soul! A granddaughter of his go off to
the Cannibal islands to be eaten up by sav-
ages! I won't have it!"

"Her heart is set upon going," I continued.
"The wedding-gown was put out to bleach,
and this very afternoon those little Berkshire
pigs of yours—they are a nuisance to the
whole neighborhood, Major—trampled and
rooted it to pieces, so that it is utterly
ruined."

"Little black rascals!" said the Major, with
a chuckle behind his neckcloth.

"And I have come without her knowledge,
to tell you of it, because I was sure that, under
the circumstances, a gentleman of your breed-
ing would feel in honor bound to make some
reparation to Miss Lyddy."

The Major mused and looked at his boot for
a moment in silence.

"Miss Grace," he said at length, "I thank
you for the service you have rendered me in
this matter. Will you have the goodness to
say to Miss Ludkins, with my compliments,
that I shall do myself the honor to wait upon
her to-morrow morning at 10 o'clock, to adjust
this unfortunate matter? I beg in the mean-
time that she will give herself as little solici-
tude as possible, for, though I cannot restore
the ancient and venerated dry goods, I will do
the best that is possible under the circum-
stances to make the loss good."

He bowed over my hand and the audience
was evidently concluded. Was I satisfied?
No, indeed! What woman would not have
felt wronged to be left at the end of a mission
of disinterested benevolence in such a state of
doubt and uncertainty as this? But I was
obliged to go home nevertheless, and wait as
patiently as I could for the stroke of 10 next
morning.

Glory had been in hearing when the mes-
sage had been delivered to Miss Lyddy, and
she too was on the watch. At last she scudded
in from the hedge, her ivory all a-glisten,
and her eyes wide open, and full of a rather
incomprehensible mirth.

"He's a comin'," she said; "and such a
sight!"

At that minute the gate clicked, and up the
walk strode indeed a most astonishing figure.
The Major had gotten himself up in a conti-
nental suit, which he must have fished out of
the unknown depths of the ancient attics at
Hawthorneau; black velvet coat, with lace
ruffles at the wrist, knee breeches, white satin
waistcoat, slippers with shoe buckles, pow-
dered wig and cocked hat. He was six feet
tall, portly and well formed, and he looked
every inch a signer of the Declaration at the
very least. He was followed by his colored
man, who carried a large brown paper parcel.

"He's come a-courtin', missus," said Glory;
"ye can see it in his face."

I had not the instinct of Glory, and doubted;
but what his errand was I was dying to know.

But he disappeared into Miss Lyddy's parlor,
and I was left outside to temper my impa-
tience as best I could. Presently Glory en-
tered on tip-toe.

"Missus, missus," she whispered. "De do's
swung open 'jess de leas' crack, an' its jess
opposite de big murror, an' if ye come out here
in de hall, ye can see it all in de murror as
plain as day, an' it's a heep better'n a play."

It was a temptation, but believe me, dear
reader, I resisted it. Only as Glory ran back
to her peeping, I followed to pull her away,
and send her out of doors—that was simply
my duty—and there he was full on his knees
before her, and she with that rapt seraphic
look upon her face, which no woman ever
wears except on the most vitally interesting
occasions. But Glory disposed of, I went
back to my sewing, and waited as best I could
the conclusion of the momentous interview.
The Major came out at length, as smiling as a
May morning, leaving the brown paper parcel
behind him.

It was very still in Miss Lyddy's room for a
quarter of an hour, and then she, too, emerged
from her retreat. Spread over her hands was
a gown of cream-colored brocade, embellished
with the loveliest roses in full bloom, with
blue forget-me-nots trailing here and there
among them. It had an ample waist, elbow
sleeves, and a train a yard and a half long.

"My dear Grace," she said, "the Major has
brought me his mother's wedding-gown to be
married in."

"It is beautiful," I said; "but who is to be
the bridegroom?"

She smiled as angels do, and looked afar; a
delicate flutter of pink hung out in her cheek
to deprecate her recreancy, as she whispered
in a tone of gentle but consummate triumph:
"The Major himself! Didn't he look grand
in his knee breeches?"

"And Mr. Applebloom?"

FOR CATARRH

boils,
pimples, eczema, and
loss of appetite,
take that sure
specific,

Ayer's Sarsaparilla
Cures others, will cure you

"Major Hawthorne will adjust that matter."
 "That matter," indeed! She spoke as though it were already as remote from her as the pyramids.
 "I congratulate you, Miss Lydia," I said, growing formal, for she had behaved shamefully.
 "Don't blame me," she murmured. "Major Hawthorne declares he has loved me since I was a child, but never thought himself worthy of me (the gay deceiver!); and Mr. Applebloom, you know, is only the acquaintance of a day."
 I wanted to ask her how she had disposed of her presentiment, but I did not dare.
 Major Hawthorne subscribed fifty dollars to the Micronesian Mission, and sent Mr. Applebloom elsewhere to look for a wife, and the verdict of Balaam's Corners was that he had done the handsomest thing.
 "Fore goodness!" said Glory, "ef dere weren't a clar' relation between dem pigs an' Providence den I don't know nothin'."
 Miss Lydia took the same pious view of the matter, and made the most dainty and dignified of wives.—*Domestic Monthly.*

WORK AND WAGES.

At the recent meeting of the learned British Association there was a discussion of the difference in the wages of men and women doing the same work. The conclusion seemed to be that there is no great difference, after all, and therefore not much to discuss.
 The same matter is debated now and then in this country. All right-thinking people will agree that a woman is entitled to the pay which a man would receive for the same work, equally well done.
 Nevertheless, this does not mean that Alice Jones, who is a clerk in Rupert & Co.'s dry goods store, and who stands at the counter beside James Stark, should have the same weekly wages as he. It is the universal custom to put more work and heavier upon the men, and usually the greater responsibility is laid on them.
 Moreover, it is a matter of common experience that men are less frequently compelled by illness to be absent from their work, and their power of endurance is, in general, greater.

This is not all, for while it takes one man to marry one woman, the man usually continues at his employment after marriage, while the woman does not. It follows that a man, being more likely to stay and to learn the ins and outs of trade, is worth more to an employer than a woman who may marry and leave him at any time.
 It follows also that in any employment where men and women are at work together the average experience of the men is the greater.
 These facts do not excuse unfairness in giving wages to men and women, but they do explain away some things that seem unfair, and that turn out not to be so.

FACE MASSAGE.

"I had you shown right up here," said a woman the other day who was receiving a friend in her bedroom, "because, as you see, I am in the midst of it."
 "It" was an hour in the hands of a professional face masseuse, says the New York Times. The caller had arrived at a critical part of the operation, when the face having been thoroughly washed in water as hot as could be borne to open the pores and get the skin in the most pliable condition, the rubbing or smoothing process had begun. With quick, light strokes of the fingers away from all lines the operator swept the countenance before her, leaving a "rosy tingling," according to the patient, when she had finished this part of her work. It was further explained to the interested onlooker that this was "dry massage." Some masseuses use a soft emollient, but this particular professor preferred to do without it save in exceptional cases. The slight hollows at the temples were next treated, and later the upper neck beneath the ears, which the plumpness of first youth is apt sooner to forsake. When the rubbing was over the face was bathed in water with a dash of alcohol and subjected to a hot vapor bath, whose ingredients were a trade secret of the professor's. Last, the softest of cloths were used in light drying and the ceremony was completed, leaving a wonderfully freshened complexion in its wake. "I found some crows' feet the other day," said the hostess when the masseuse had packed her little bag of implements and departed, "and flew to this relief. It is sure to do wonders, and presently I shall learn the knack myself, so as to be able to continue the treatment after a course with this professional."

\$100 REWARD. \$100.

The readers of the FARM AND FIRESIDE will be pleased to learn that there is at least one dreaded disease that science has been able to cure in all its stages, and that is Catarrh. Hall's Catarrh Cure is the only positive cure now known to the medical fraternity. Catarrh being a constitutional disease, requires a constitutional treatment. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system, thereby destroying the foundation of the disease, and giving the patient strength by building up the constitution and assisting nature in doing its work. The proprietors have so much faith in its curative powers, that they offer One Hundred Dollars for any case that it fails to cure. Send for list of testimonials. Address, F. J. CHENEY & CO., Toledo, O.
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THINGS THE QUEEN MAY NOT DO.

Queen Victoria, not being born a queen, probably learned to read just like other persons. But after she became afflicted with royalty she found that a queen is not allowed to have a great many privileges that the humblest of her subjects can boast. For instance, she isn't allowed to handle a newspaper of any kind, nor a magazine, nor a letter from any person except from her own family, and no member of the royal family or household is allowed to speak to her of any piece of news in any publication. All the information the queen is permitted to have must first be strained through the intellect of a man whose business it is to cut out from the papers each day what he thinks she would like to know. These scraps he fastens on a silk sheet with a gold fringe all about it, and presents to her unfortunately majestic. This silken sheet with gold fringe is imperative for all communications to the queen. Any one who wishes to send the queen a personal poem or communication of any kind (except a personal letter, which the poor lady isn't allowed to have at all) must have it printed in gilt letters on one of these silk sheets with gold fringe, just so many inches wide and no wider, all about it. These gold trimmings will be returned to him in time, as they are expensive, and the queen is kindly and thrifty, but for the queen's presence they are imperative. The deprivations of the queen's life are pathetically illustrated by an incident which occurred not long ago:

An American lady sent her majesty an immense collection of the flowers of this country, pressed and mounted. The queen was delighted with the collection and kept it for three months, turning over the leaves frequently with great delight. At the end of that time, which was as long as she was allowed by court etiquette to keep it, she had it sent back with a letter saying that, being queen of England, she was not allowed to have any gifts, and that she parted from them with deep regret.—*Helen Watterson, in Philadelphia Inquirer.*

EVERY MOTHER

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Our Household.

THE BETROTHED.

RUDYARD KIPLING.

"You must choose between me and your cigar."

Open the old cigar-box, get me a Cuba stout,
For things are running crossways, and Maggie and I are out.

We quarreled about Havanas—we fought o'er a good cheroot—
And I know she is exacting, and she says I am a brute.

Open the old cigar-box—let me consider a space,
In the soft blue veil of the vapor musing on Maggie's face.

Maggie is pretty to look at—Maggie's a loving lass,
But the prettiest cheeks must wrinkle, the truest of loves must pass.

There's peace in a Laranaga, there's calm in a Henry Clay;
But the best cigar in an hour is finished and thrown away—

Thrown away for another as perfect and ripe and brown—
But I never could throw away Maggie for fear o' the talk o' the town.

Maggie, my wife at fifty—gray and dour and old—
With never another Maggie to purchase for love or gold.

And the light of days that have been, the dark of the days that are,
And love's torch stinking and stale, like the butt of a dead cigar—

The butt of a dead cigar you are bound to keep in your pocket,
With never a new one to light, though it's charred and black to the socket.

Open the old cigar-box—let me consider awhile;
Here is a mild Manila—there is a wifely smile.

Which is the better portion, boudage bought with a ring,
Or a harem of dusky beauties, fitly tied in a string?

Counselors eunning and silent, comforters true and tried,
And never a one of the fifty to sneer at a rival bride.

Thought in the early morning, solace in time of woes,
Peace in the hush of the twilight, balm ere my eyelids close.

This will the fifty give me, asking naught in return,
With only a Suttie's passion—to do their duty and burn.

This will the fifty give me. When they are spent and dead,
Five times other fifties shall be my servants instead.

The furrows of far-off Java, the isles of the Spanish main,
When they hear that my harem is empty, will send me my brides again.

I will take no heed to their raiment, nor food for their mouths withal,
So long as the gulls are nesting, so long as the showers fall.

I will scent 'em with best vanilla, with tea will I temper their hides,
And the Moor and the Mormon shall envy who read of the tale of my brides.

For Maggie has written a letter to give my choice between
The wee little whimpering love and the great god Niek O'Teen.

And I have been servant of love for barely a twelve month clear,
But I have been priest of Partagas a matter of seven years;

And the gloom of all my bachelor days is flecked with the cheery light
Of stumps that I burned to friendship, and pleasure and work and fight.

And I turn my eyes to the future that Maggie and I must prove,
But the only light on the marshes is the will-o'-the-wisp of love.

Will it see me safe through my journey or leave me bogged in the mire?
Since a puff of tobacco can cloud it, shall I follow the fitful fire?

Open the old cigar-box—let me consider anew,
Old friends, and who is Maggie that I should abandon for you?

A million surplus Maggies are willing to bear the yoke;
And a woman is only a woman, but a good cigar is a smoke.

Light me another Cuba, I hold to my first-sworn vows,
If Maggie will have no rival, I'll have no Maggie for spouse!

HOME TOPICS.

SPRING BREAKFASTS.—At this season of the year the appetite is apt to be variable, and the breakfast that a month or two ago was appetizing and nice will now be left almost untouched. Fruit is craved more than at any other season. Happy is the housekeeper who has a good supply of canned and dried fruits in her store-room. Even the much-abused dried apple makes a very palatable sauce when properly stewed. Wash the dried apples thoroughly and soak over night in cold water. In the morning put them over the fire in the water they were soaked in and stew them slowly until tender, but not broken. Add sugar enough to sweeten, and a little hot water if there is not juice enough. For variety a few slices of lemon may be stewed with the apples, or a cupful of raisins. Stewed prunes are improved by cooking them as above, and when they are done, dissolve a teaspoonful of corn-starch in two tablespoonfuls of vinegar and add with the sugar. Let all boil up a minute and remove from the fire. Where the pomelo can be procured it is the ideal fruit for spring breakfast, and oranges are also nice.

Wheat germ meal or wheatena, granula, wheatlet or cerealine flakes are either of them agreeable and healthful substitutes for oatmeal, of which one sometimes tires. Instead of meat use eggs cooked in various ways. Saratoga potatoes are dainty and appetizing. Pare the potatoes and slice them very thin, let them lie in cold water an hour, then dry them in a towel and drop them, a few at a time, into boiling fat. As soon as browned, remove from the fat and sprinkle with salt. Early radishes, while they do not contain much nutriment, are a pleasant relish for breakfast; so is young and tender water-cress.

I lately saw a dish of hard-boiled eggs served as follows, and it was quite ornamental as well as inviting to the appetite: In the first place, if eggs are to be cooked hard, they should boil fifteen minutes, or until the yolks will be mealy. When the eggs are done take off the shells, drop the eggs into a bowl of hot, salted water and set them where they will keep hot until wanted. When ready to serve them put a layer of cress in a dish, lay in the eggs and sprinkle cress lightly over the top. An attractive table is a good appetizer; hence, every dish should be made to look as tasteful as possible. A little care in this direction is well repaid.

DON'T HURRY.—There is no doubt that hurry and worry wear the people out much faster than work. When we begin the day with the thought that the work is crowding, and wonder if we shall get it done, if we watch the clock, impatient that the hours are slipping away so fast, the mind tires the body. We have no right to drive ourselves at this rate. If we can only keep ourselves from feeling hurried we shall get through the day much easier. It is not always the work we do in a day that tires us, but the work that we meant to do and did not get done.

While it is important to plan one's work in advance, yet be careful to not plan too much, nor let your plans be as unchangeable as the laws of the Medes and Persians. No time is really wasted that is spent by the busy housewife in a little rest now and then. It need not be sleep, but the dropping down on a lounge, relaxing every muscle and closing the eyes, for even a few minutes will rest one wonderfully. A motto taken from my calendar seems to me good advice for every busy housewife:

"As thy day thy strength shall be."

"Enjoy the blessings of this day as God sends them, and the evils of it bear patiently and sweetly; for this day only is ours; we are dead to yesterday and are not yet born to-morrow." MAIDA McL.

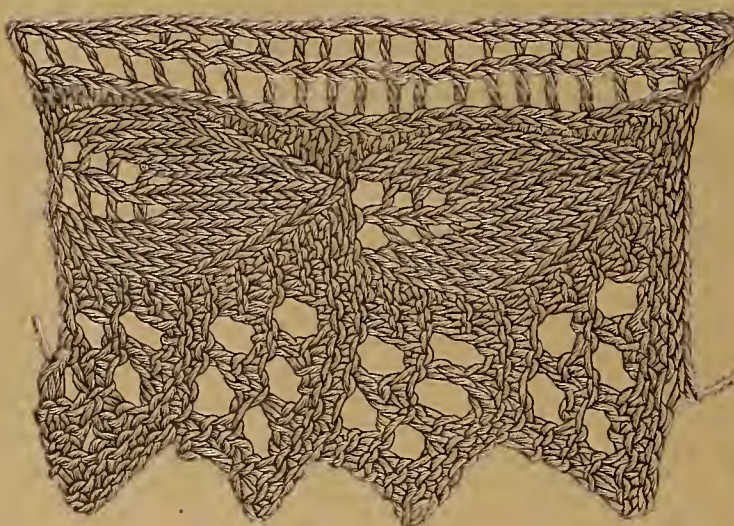
MISS FLORA JONES, SOUTH BEND, IND., pays \$17 a week to ladies for writing, etc., at home. Reply with stamped envelope.

BURDETTE ON TIME.

Six working days a week; that's all you can get unless you steal from Sunday, and if your business requires you to steal either time or money, you'd better give it up and get into something with more honesty and less profit in it. What you can't finish this week postpone until next, or forever; and what sticks out over the end of the year saw off and put in the stove, writes Robert J. Burdette in his department, "From a New Inkstand," in the March *Ladies' Home Journal*. Four seasons have passed and that's all there is. You must make a fresh start every year. It isn't an easy matter to learn how to do this, but you've got to learn it sometime, either before you die or when you die; why not learn early and get the good and the comfort of it? Every day of my life the evening is apt to find something on my program that I haven't got to. I say, "Maybe I won't do that to-morrow," and as a rule I don't. I go to sleep and forget about it. Every year closes with uncompleted work on my hands, and that year ends that work. I'm not going to drag it along with me into a new year. I used to do that, so that about half the time I was working six weeks ago instead of to-day, and dragging, wearisome business it was. When you die there will be unfinished work and raveled-out plans on your hands. Then what are you going to do? Take it to heaven with you and bother and drag along with it there? Not much you won't. Well, then, why not learn to drop some of it here? It is a lesson not so easily learned, but once learned, it is more refreshing than a glass of cool milk to the lips of a man with the grip.

KNITTED RAISED LEAF EDGING.

Explanation of abbreviations used: K, knit; n, narrow (knit 2 together); p, purl; tto, throw thread over; s, slip.



KNITTED RAISED LEAF EDGING.

Cast on 20 stitches. Knit across plain.

First row—S 1, k 2, tto, n, tto, n, p 2, k 1, tto, k 1, tto, k 1, p 2, k 2, tto twice, n, tto twice, k 2.

Second row—K 3, p 1, k 2, p 1, k 4, p 5, k 2, p 6, k 1.

Third row—S 1, k 2, tto, n, tto, n, p 2, k 2, tto, k 1, tto, k 2, p 2, k 9.

Fourth row—K 11, p 7, k 2, p 6, k 1.

Fifth row—S 1, k 2, tto, n, tto, n, p 2, k 3, tto, k 1, tto, k 3, p 2, k 2, tto twice, n, tto twice, n, tto twice, n, k 1.

Sixth row—K 3, p 1, k 2, p 1, k 2, p 1, k 4, p 9, k 2, p 6, k 1.

Seventh row—S 1, k 2, tto, n, tto, n, p 2, k 4, tto, k 1, tto, k 4, p 2, k 12.

Eighth row—K 14, p 11, k 2, p 6, k 1.

Ninth row—S 1, k 2, tto, n, tto, n, p 2, k 11, p 2, k 12.

Tenth row—Cast off 5 stitches, k 8, p 11, k 2, p 6, k 1.

Eleventh row—S 1, k 2, tto, n, tto, n, p 2, slip and bind 1, k 7, n, p 2, k 2, tto twice, n, tto twice, n, k 1.

Twelfth row—K 3, p 1, k 2, p 1, k 4, p 9, k 2, p 6, k 1.

Thirteenth row—S 1, k 2, tto, n, tto, n, p 2, slip and bind 1, k 5, n, p 2, k 9.

Fourteenth row—K 11, p 7, k 2, p 6, k 1.

Fifteenth row—S 1, k 2, tto, n, tto, n, p 2, slip and bind 1, k 3, n, p 2, k 2, tto twice, n, tto twice, n, tto twice, n, k 1.

Sixteenth row—K 3, p 1, k 2, p 1, k 2, p 1, k 4, p 5, k 2, p 6, k 1.

Seventeenth row—S 1, k 2, tto, n, tto, n, p 2, slip and bind 1, k 1, n, p 2, k 12.

Eighteenth row—K 14, p 3, k 2, p 6, k 1.

Nineteenth row—S 1, k 2, tto, n, tto, n, p 2, k 3 stitches together, p 2, k 12.

Twentieth row—Cast off 4, k 12, p 5, k 1. Repeat from first row.

MISS M. A. OBERMAN.

SOCIAL ENTERTAINING.

To do this nicely there are a few points to remember; first, be careful to invite the right people together. Much more pleasure can be gotten out of six small entertainments than one enormous crush.

To prepare your friends, a little item might appear in your city paper to this effect:

"Mrs. George Rathburn is intending to give a series of entertainments in the near future."

Then proceed to make up your lists. First, those of your especial friends to whom you are most indebted. If there is a newcomer whom you would like these friends to meet and welcome to your city or church, let them be included.

Do not mix your companies too much; there are people who do not mix any more than oil and water, and there is scarcely any one whose visiting list doesn't comprise people in several grades of society; all good ones, I mean, but different.

If you choose to make your invitations verbal there is no objection, but if you send a written one let it be simple and elegant in its appearance. If you do not write nicely, some one among your friends certainly can; employ them. Why people who have taken pains to become good penmen should furnish it gratuitous to everyone who asks for it, is a problem I have never solved.

Do not use highly ornamented cards or paper, or envelopes stamped with flowers in colors or otherwise. The paper or card should be of good quality and of cream or white color. The envelopes should match. A very good form to use is:

MRS. SIDNEY HOWELLS
REQUESTS THE PLEASURE OF THE COMPANY OF
MR. AND MRS. JOHN STEELE
ON THURSDAY EVENING, JUNE THE FOURTH,
AT NINE O'CLOCK.

The favor of an answer is requested.

If an acceptance is sent it can be something like the following:

MR. JOHN HAYWARD
ACCEPTS WITH PLEASURE THE POLITE
INVITATION OF
MR. AND MRS. SAUL SEYS
FOR THURSDAY EVENING, JUNE THE FOURTH,
18 CARELTON AVENUE.

It is only ordinary politeness that the invitations and letters of acceptance should be of this formality, to correspond with the pains taken by your hostess.

In parties where the company of a young man is assigned to a certain young lady, it is a positive insult to the hostess who invites him if he refuses to escort the young lady there.

In all society matters we cannot choose companions, but it hurts no one to be civil and polite for that time, whether they care to keep up civilities afterwards or not. At a sit-down table entertainment it is often a great annoyance to the hostess to have empty places. Happy is she who has some one she can call upon to fill it upon short notice.

A lady wishing to educate her little son in these matters said:

"Now, Robby, if you don't want to go to Bessie Smith's party, you must write a note and tell her so; and be sure and put it politely. You will find some models in this book of etiquette." Robby struggled with the problem for an hour, and then presented for his mother's inspection the following truthful but unconventional effusion: "Mr. Robert Carhart declines with pleasure Miss Bessie Smith's invitation for the 14th, and thanks her extremely for having given him the opportunity of doing so."

Of course, adults will avoid this form of answering their invitations, but it is astonishing how many make almost as egregious mistakes as this. It is appalling how hard teachers in letter-writing find it to educate people in the use of good stationery. People to whom you would not offer a drink of water in an old tin dipper, you will write to on any kind of paper, a postal card or anything that is handy.

I feel quite as insulted with such letters as if it were any other rudeness. The claim that it is owing to the haste of the present day, cheap paper and cheap postage is no excuse whatever. If cheap it can at least be good. It is very bad taste for a lady to use her husband's business paper for formal letters, and to use it after he has gone out of that business is quite bad form. There are houses where everything seems to be thought of but the

proper things to write a letter or a note with, and so anything is taken when the necessity arises.

If possible, learn to use unruled paper, as it is far more elegant. Never be drawn into using any kind of fancy decorated paper or pronounced colors, unless of a very elegant style—as the terra cotta, gray, clover green and heliotrope now used by some.

Overlook your children's letters to their friends and suggest improvements wherever you can; even if it must be rewritten. It is good practice for them, and do not allow them to use a lead-pencil. People who stay at home a great deal often miss the opportunity of having letters; but supply this by all writing each other a letter once a month, and then answering them. Sometimes you might call their attention to some fault you would like them to correct, and as the letter is private between you it would not hurt as a public reproval before the whole family. Carefulness for a short time in these matters would make marked improvement in the family correspondence. Try it, and letter-writing will be only a pleasure—as it should be.

LOUISE LONG CHRISTIE.

NEXT TIME DON'T DO IT!

When the warm weather comes, and the earth buds and blossoms, then appear the seed catalogues, with their gorgeous displays and enticing offers; and forthwith every busy housewife persuades her "good man" to dig up a large tract of land, and she proceeds to lay out work enough to give her the backache all summer.

Now, let me say, next time don't do it! Now, methinks I hear a chorus of voices exclaiming, "Oh, what a horrid creature; she doesn't love flowers!" Yes, I do, too, and to those who have plenty of time and help, I haven't a word to say. But suppose about midsummer you visit this same flower garden that was laid out on such a grand scale. What, can this real have any relation to the ideal in the gorgeous catalogues? Whence are these grass-like plants, and these impudent-looking specimens, called in common parlance pig-weed? When the flowers sprang up, then appeared the weeds also, and the poor housewife with no end of cares, thinks with a sigh of those weeds, and tries to appease her troubled conscience by running out and snatching up a few tares here and there; but there is such a vast territory to be gone over that she is tired and discouraged.

Then comes a time of drouth—the hot sun scorches the tender plants, and unless they are daily refreshed by pails upon pails of water they are soon hopelessly withered. So what was to have been a joy and delight becomes a burden "too grievous to be borne."

Now just try another way. In some suitable place have a gypsy kettle hung (an old iron kettle hung between three sticks, and the whole painted red), and if you like, have one or two urns, if you have pretty places for them. Fill these with any plants that suit your fancy, with vines to trail over the sides of the kettle or urns. Then if you have a veranda, have boxes made to fit between the posts all along the outside edge, and raised two or three feet from the floor. The boxes should be about a foot wide, and the same in depth. Have them painted a suitable color.

Now fill with such flowers as begonias, fuschias, geraniums, Ageratum, heliotrope or anything you like, not forgetting vines and feathery flowers to embellish the edges of the box.

"These will have to be watered," you say. Certainly; but you can take a pitcher any time as you step out onto the veranda, and the work will seem no trouble at all, and without bending one can pull off dead leaves or loosen the dirt here and there, as one stands admiring the beauty of the little flower garden; and it is sure to be beautiful, for it can have the needed care, being so slight a task to attend to it.

The fiercest rays of the sun will not

strike it, and the plants will do better in consequence. Try this plan and see if you are not pleased with the result.

DOROTHY JANE.

A WONDERFUL CURE.

There was once a girl in Dixie, so quarrelsome and tricky,
If she couldn't rule the other girls she'd say she wouldn't play!
And her mother sighed, "My Julia is so nervous and peculiar
That how I'm e'er to govern her is more than I can say."

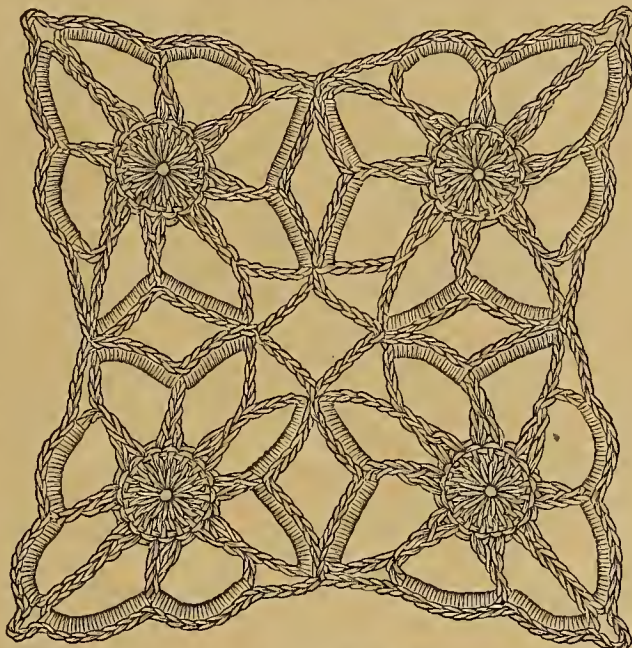
But a funny little woman (who was more or less than human)
Saw that wilful little maiden once break up a merry play,
And she took her and she shook her, till the "nervousness" forsook her,
And that sad "peculiarity" was shaken quite away.

—St. Nicholas.

HOUSEHOLD HINTS.

I should hardly be doing right, to have been a reader of your pages so many years, if I did not do something to pay for the many valuable hints, rules, recipes and information received during the time. What I am going to tell may be old to the readers, or may have been given some time, but as I have never seen it, I will venture to hope that it is new.

In looking over my stock of worsteds (which every fancy work housekeeper possesses), I found a quantity (by which I mean a good-sized ball) of the following colors: Dark myrtle green, two balls; two shades of red, one ball each; light blue, apricot pink, black, white and yellow, each one ball. I proceeded to devise a Roman stripe, by which I could use the colors which I had, and have something pretty and serviceable when it was done. I arranged the following, which I



LOVE-JOY TIDY CROCHETED.

presume would be prettier with other colors, but would not accommodate my rag-bag as well. I began the stripe by knitting 24 rows (a row being back and forth in plain garter stitch) of the myrtle green, then for the Roman stripe as follows: 2 yellow, 2 apricot pink, 5 black, 3 white, 6 dark or medium red, 3 light blue, 1 yellow, 3 light blue, 6 red, and so on, repeating until the myrtle green is reached, when I knit 18 rows of that, and then another stripe as before, the one row of yellow being the center of the Roman stripe. Five of these Roman stripes, with the 24 rows of myrtle green at the ends, make just about the length of stripe for a couch afghan, but if not sufficiently long the addition of one more fancy stripe would make it ten inches longer. If any one should wish to try this, and it is not perfectly clear, I will gladly explain or send a card of colors.

I make an oyster omelet, which seems to be so new to everyone who eats it and so universally liked, that I am going to give that:

- 1 cupful stale bread, broken fine,
- 1 cupful of milk, with the bread soaked in it,
- 2 eggs (or as many more as you can afford),
- 1 pint of oysters,
- 1 teaspoonful of salt,
- Pepper to taste.

Have the iron frying-pan hot, with melted butter as large as the size of an egg in it, and after the ingredients are stirred together, pour in the spider and brown, turning with a pan-cake turner, or it can be dropped in spoonfuls, and fried, as may be preferred.

Now I want to ask if some one of your readers can give me a rule for knitting a plain stripe to put with my Roman stripe, which is not too much work, as I am not much of a knitter, but would like something besides a plain garter stitch, and would like to have four Roman and three plain stripes. I know a pretty way to put them together, if any one would like to know. Perhaps what I want has been published; and if so, will you please refer me to the number of the paper? I had the files for a good many years back, but a fire which burned a part of our house consumed all but 1890 and 1891, and anything contained in those two years I can easily find.

T. G. M.

LOVE-JOY TIDY CROCHETED.

First row—Begins in the center and made in stars, and after the first one is made the rest are joined together, when made, by two stitches, first and last st of chains and double crochet.

Chain 6, join, ch 3, 15 trebles in ring of 6 ch, 16 tr, counting 3 ch, join to top of 3 ch with single crochet.

Second row—Ch 4, 1 tr in first tr of previous round, * ch 10, 1 lg tr in next, keeping last over and st on hook, 1 tr in next. Now have 4 st on hook, throw thread over and draw through 3 st, thread over and draw through the 2 remaining st. Repeat from * until you have 8 loops of 10 ch, join to top of 4 ch.

Third row—* 10 d c under first half of 10 ch, ch 7, 10 d c under last half of next chain. Repeat from * 4 times, fasten. Now you have one star.

ELLA McCOWEN.

ELSIE'S CHATTER.

I've had a delightful time, mamma, a whole week in the country. Mrs. Reed knows so well how to entertain. Her home could not properly be called elegant, yet there is an air of culture and refinement in every room; indeed, some of them are quite æsthetic. Her library contains a good selection of books, and little piles of the best magazines, here and there, show a cultivated taste in reading. I noticed the *Tribune*, *Advance*, *Scientific American*, *FARM AND FIRESIDE* and *Rural*

New-Yorker on Mr. Reed's table, besides local papers.

Their piano is a good one, and they enjoyed my instrumental music, as neither of them play, and their little daughter Maud is only learning. Mr. Reed liked Handel's "Harmonious Blacksmith," and Mrs. Reed admired Weber's "Invitation to the Dance," and don't you think, mamma, they both liked that weird, uncanny thing, Heller's "Tarantelle."

Their surroundings are delightful; the lawn around the house is extensive, and is kept in perfect order; a fountain sparkles in the sun, and choice plants and flowers grow in profusion. Don't let me forget to tell Bello Blake about the lawn, as she said I would probably find the gate hanging by one hinge and the yard full of calves and geese.

The neat hedges and fences which divide the farm into fields give it a very picturesque appearance. There are orchards of apples and peaches, and little fields of all kinds of growing berries, while grape-vines, and pear-trees and cherry-trees show where their great plenty of the best of fruit is gathered. Everybody admires Mr. Reed's blooded stock, especially his Holstein cattle. Mrs. Reed has a pair of ponies so gentle that even I could drive them.

But, mamma, all the farms between here and the Reeds' were not so nice. Why does not every farmer endeavor to beautify his home? Of course, it requires taste and labor and money to make a home beautiful, but the results would be so satisfactory that the investment would be found a good one, as a handsome, well-kept farm is always more salable than a rough, untidy one.

Mrs. Reed is an excellent housekeeper, and very methodical in all her work; she is a good cook, and I have a handful of recipes which she gave me. This one of the spice cake is plain, but it is good and handy, as one can bake a double complement and keep it nice and fresh until used. I'll read you the recipe, mamma, and then I shall give it a practical trial.

- 3 eggs,
- 1 cupful of butter,
- 2 cupfuls of sugar,
- 4 cupfuls of sifted flour,
- 1 cupful of cold water,
- 1 teaspoonful of soda dissolved in the water,
- ½ teaspoonful of ground cinnamon,
- ½ of a nutmeg,
- ½ teaspoonful of ground cloves,
- ½ pound raisins,
- ½ pound English currants.

This makes two medium-sized cakes.

Cousin NABBIE.

SPRING

According to the Medical Almanac, is the time to clean the system, as well as the house. "Gentle Spring" is far gentler than their Spring medicines. Suppose now, instead of taking a dose for the stomach, that our every-day house cleaner, the blood, was purified as nature does it—with the air we breathe? Suppose for this purpose you should take Drs. Starkey & Palen's COMPOUND OXYGEN, which is common air, enriched with oxygen, and magnetized? This done, supposition ends. That this will purify the blood, heal the lungs, and quiet the nerves, is as easy of demonstration as that water will quench thirst.

If you are sick, or run down, try COMPOUND OXYGEN. You will miss the taste and the trace of the Spring medicine, but a better result will be yours. We have over 60,000 carefully recorded cases. Some of them are printed in a book of 200 pages, which we send free to any one requesting it.

Drs. STARKEY & PALEN, 1529 Arch St., Philadelphia.

120 Sutter St., San Francisco, Cal. 864 Broadway, New York. 66 Church St., Toronto, Canada.

BROWN'S FRENCH DRESSING

—FOR—

LADIES' SHOES.

SOLD EVERYWHERE.

B. F. BROWN & CO.,
Boston, U.S.A., M'f'rs.

Do you own Tokology, a complete Ladies' Guide in health and disease? I cannot say enough in its praise. I ask every woman: Have you TOKOLOGY—if not, then get it at once—its value cannot be estimated. Mrs. K. writes: "Send me an outfit for TOKOLOGY, my aunt says, 'If you sell books, sell TOKOLOGY as it is next to the Bible the best book I ever read.'" Sample pages free. Prepaid \$2.75. Best terms to Agents.

Alice B. Stockham & Co., 277 Madison St., Chicago.

If afflicted with sore eyes use **Dr. Thompson's Eye-Water**

"A dollar saved is a dollar earned."

This Ladies' Solid French Dongola Kid Button Boot sent, prepaid, anywhere in the U. S., on receipt of Cash, Money Order, or Postal Note, for \$1.50. Equals every way the boots sold in all retail stores for \$2.50.

We make this boot ourselves, therefore we guarantee the fit, style and wear, and if any one is not satisfied we will refund the money or send another pair.

Common Sense and Opera Toe, widths C, D, and E, sizes 11-2 to 8, in half sizes. Send your size; we will fit you.

We deliver Free.

\$1.50

Dexter Shoe Co., 143 Federal St., Boston, Mass. (Formerly 299 Devonshire St.)

HAPPY HOMES

By using the **BEVERIDGE COOKER**. Latest and simplest cooking utensil. No odor. Food can't burn. Saves labor and fuel. Cooks on oil, gas or coal stove. Agents wanted, either sex. Big pay. A lady sold 1730 in one town. Address, for terms, **V. E. BEVERIDGE**, Baltimore, Md.

PHOTOGRAPH CAMERA and complete chemical outfit, \$1. Makes photos, size 2½x2½. Descriptive catalogue of all price Outfits and Sample photos FREE. **H. S. SIMMONS**, 294 B'way, N. Y.

WANTED—INDIAN RELICS, &c. Send 6c. for list of prices I pay for rare coins, old paper money, Stamps, Relics, &c. **R. W. MERCER**, CINCINNATI, O.

VARICOCELE A simple but certain recipe for self cure sent Free to any sufferer. **Chas. E. Gaus**, Box 175, Marshall, Mich.

Our Sunday Afternoon.

STRENGTH FOR THE DAY.

Strength for the day! At early dawn I stand
Helpless and weak, and with unresting eyes
Watching for the day. Before its portal lies
A low, black cloud, a heavy iron band!
Slowly the mist is lifted from the land,
And pearl and amber gleam across the skies,
Gladdening my upward gaze with sweet
surprise!
I own the sign. I know that He, whose hand
Hath fringed those somber clouds with ruby
ray,
And changed that iron bar to molten gold,
Will to my wandering steps be guide and
stay—
Breathe o'er my wavering heart His rest for
aye,
And give my waiting, folded hands to hold
His blessed morning boon—strength for the
day.

—Rachel G. Alsop.

TRANSFIGURED SORROW.

You

MAY know how it is
supposed the pearl is
formed. A grain of
sand, or some for-
eign substance, get-
ting entrance with-

in the shell of an oyster, hurts its sensi-
tive body, which, having no power to ex-
pel the cause of pain, covers it with a
secretion, and by degrees rounds off all
sharp angles, molds it into a sphere, and
finishes it with a polished surface. Thus
it accepts the inevitable presence as a part
of its life, and when it dies yields up,
shaped and perfected, a perfect gem,
lovely with the tints of the skies, a jewel
whose worth is far beyond the pain that
gave it existence.

God often introduces into human lives
some element of discomfort, unrest or
suffering—a thorn in the flesh that cannot
be plucked out, a burden that must be
borne, a daily cross not to be laid down.
Some souls thus dealt with chafe against
the trial; they contend with it till their
sensibilities are lacerated by its cruel
edges, and their hearts become morbid
and bitter. They make its presence one
long, perpetual pain and poison. Others
recognizing the trial as heaven sent, and
therefore not to be escaped from, accept
it, not with joy, indeed, but with meek-
ness, and though it press hard and
sharply, they wear it with a sweet
patience that, day by day, enables them
to carry it more easily. It even becomes
the source of an inward development, the
growth of a grace which at the last proves
to be the crowning, adorning attribute of
their character, the especial quality which,
rounded out to perfect symmetry, reflects
the beauty of heaven.—*Illustrated Chris-
tian Weekly.*

PRAY IN CHRIST'S NAME.

It is absolutely essential to successful
prayer that we offer our petitions in the
name of Christ. This clearly means that
we ask in his spirit or in his stead. We
must ask what would not be out of place
for him to ask were he here, ask as his
servant, bearing his commission, stand-
ing in his place.

Very much that men commonly ask for
is cut off at once when this test is applied.
Most prayers are selfish prayers; and
Christ never thought of self, or pleased
self, or sought his own glory. It would
be impossible to imagine him offering the
majority of the petitions which his
followers present. We can use his name
only when we are asking in the interests
of his cause, just as a servant can use the
master's name, in making purchases, only
so far as he buys in the interests of that
master and by his authorization.

It is the motive in asking that makes all
the difference in the world whether our
prayers have favorable or unfavorable
issue. Wrong motives furnish a fully
sufficient explanation for a vast number
of unanswered prayers. Christ will not
countersign petitions that are offered for
the progress of some petty scheme of our
own without reference to the advance-
ment of his kingdom.

TRUE HOPE.

Hope grasps something due in the
future. "If we hope for that which we
see not, then do we with patience wait for
it." But there are two indispensable pre-
requisites to the exercise of true hope;
namely, a true heart and a true faith.

1. We have no right to hope for what
God has promised, unless we have right
hearts, for his promises of future glory

are all based on conditions involving
heart purity; so if we repudiate or ignore
those conditions we forfeit all claims to a
participation in the promised glory of
futuraity. So the true hope cannot be
properly exercised by those who lack
heart purity, since they have no right to
hope for what their moral status denies
them, or what God says he will not give
them.

2. Unless we have a right faith, we can-
not hope for the right things, for as long
as our faith involves what God has never
promised, and also what he has denied to
us, we are hoping for what we can never
receive; and such a hope is not genuine,
no matter how honestly entertained. A
right hope will look for the right thing,
as well as come from a right heart; but if
we hope for the wrong thing, our hope
needs rectification, whether our hearts do
or not. It is possible to have a right heart
coupled with a wrong faith, thus leading
its possessor to hope for the wrong thing;
but it is far better to have a right heart
coupled with a right faith, as a founda-
tion for a right hope—"the hope of eternal
life," to be realized when the sleeping
saints shall awake "to everlasting life."
—W. S., in *Our Hope.*

THE BOOK WILL TELL.

A real Christian will be a true lover of
the Bible. There is scarcely a better test.
If the novel or the newspaper take the
place of the Bible on his table or in his
mind, then it is clear that the world has
taken the place of God in his heart. If a
man's Bible be clean and bright, and un-
sullied by use, undefiled by contact with
daily life, his soul is not. There is no
better spiritual barometer to test the true
condition of the soul's atmosphere. He
to whom the Bible seems wearisome,
monotonous, uninteresting, has good
cause for alarm. The neglect of it springs
from coldness of affection towards its
author, and dislike of his rebukes. Who-
ever wants to grow in grace simply must
study the Bible. It is the way to gain
stability of doctrine so as not to be carried
about with every wind of opinion. It is
the way to commune with the noblest
spirits that ever lived, and be stimulated
by their bright example. It is the way to
become familiar with the loftiest precepts,
receive the truest counsels, and come un-
der the power of the holiest motives.
Only he who studies the word can be
stroug.—*Christian Standard.*

PUT UP THY SWORD.

Jesus was surrounded by the armed
band in the garden, who came with
swords and with staves to take him.
The betrayer's kiss had been given, and
the master was in the power of the enemy.
The impetuous Peter drew his sword, and
struck off the ear of the high priest's ser-
vant. Jesus rebuked him, saying, "Put up
thy sword into the sheath! The cup
which my father hath given me, shall I
not drink it? Understandest thou not
that I am here for a purpose, and I must
fulfill it? Hast thou not yet learned that
my kingdom is not of this world, and my
servants are not called to fight with car-
nal weapons? Thinkest thou that I can-
not pray to my father, and he shall
presently give me more than twelve le-
gions of angels?"

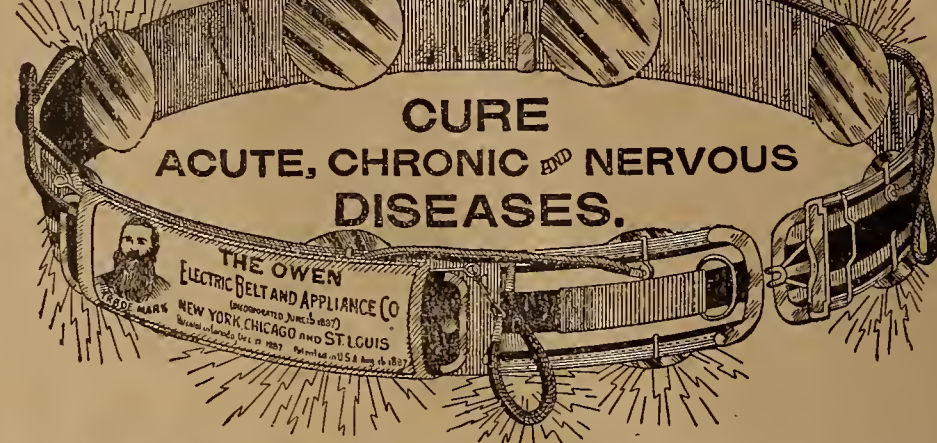
"Put up thy sword!" Many of Christ's
followers have erred, as did Peter. They
have rushed into the fight with carnal
weapons. How signal their defeats! But
with the spirit's keen, two-edged sword
well in hand, wielded valiantly, oh, there
is conquest and glory in every stroke!
Wield it! Wield it! Let it be demon-
strated that you are conquerors, and even
"more than conquerors."—*Christian Stan-
dard.*

LAND-SEEKERS.

It will be of interest to those contemplating
settling in the Northwest, to know that the
choicest farming and timber lands in Wiscon-
sin are tributary to the Wisconsin Central
Lines. Settlers on these lands have all the
advantages of healthful climate, good market
facilities, abundance of fuel and building ma-
terial, pure and sparkling drinking water, and
other important benefits which cannot be en-
joyed on the prairies of the West. No droughts,
no cyclones, no grasshopper plague and no
fever and ague. Now is the time to select
choice lands at low prices. Wisconsin is con-
sidered one of the most prosperous states in
the union. Located directly on the Wisconsin
Central Lines in this state are the thriving
cities of Burlington, Waukesha, Fond du Lac,
Oshkosh, Neenah, Menasha, Waupaca, Stev-
ens Point, Marshfield, Chippewa Falls, Eau
Claire, New Richmond and Ashland. For
tickets, time tables, maps and full informa-
tion apply to J. J. FERRY, D. P. A., Wis. Cen.,
Cincinnati, Ohio, or to JAS. C. Pond, General
Passenger and Ticket Agent, Chicago, Illinois.



(TRADE MARK)
DR. A. OWEN.



CROOKED LIMBS the result of MALARIAL FEVER MADE STRAIGHT BY USE OF THE OWEN ELECTRIC BELT!

ELMER, Mich., March 23, '92.
The Owen Electric Belt and Appliance Co., Chicago, Ill., GENTLEMEN:—My boy (aged 10 years)
had the Malaria Fever. It settled in his limbs and drew them out of shape.
All the doctors that saw him could do nothing to relieve him.
The Owen Electric Belt was recommended by a friend, and after using it three weeks his
limbs became straight and he is all right now. You can refer any one to me for testimony.
E. D. HILBORN.

The Owen Electric Belt Recommended for Kidney Disease.

LE ROY, MOWER CO., MINN., March 9, 1892.
Dr. A. Owen, DEAR SIR:—I have recommended the Owen Electric Belt to all sufferers with
Kidney Disease, because I have been cured by it. I wore the belt steady for 8 weeks, and the re-
sult was a cure. I hope that those who are suffering from this or any other disease will try
one of the Owen Electric Belts and receive benefit from the same.
Respectfully,
H. FRANDSEN.

The Fair Thing Between Man and Man.

CANYON FERRY, MEAGHER CO., MONT., Feb. 18, 1892.
Dr. A. Owen, DEAR SIR:—I received the battery which you sent to me free of charge. I am
exceedingly thankful for the same and hope you will prosper in your good work, for I believe
you are doing the fair thing between man and man.
Now my belt is as good as new and it is your generosity that makes it so. I shall always
speak a good word in favor of the Owen Electric Belt for it has done me a great deal of good,
and I feel it my duty to recommend it to those who are troubled with chronic and nervous
diseases. If these few lines are of any service, you are at liberty to use them as a testimonial,
though they were not written for that purpose, but just merely to express my thanks to you
for your kindness, and for the good the Owen Electric Belt has done me.
Respectfully,
H. H. DODGE.

ON LAND AND SEA.

A CAPTAIN ON BOARD OF HIS SHIP, WAS TAKEN SICK, BUT WAS QUICKLY CURED ON LAND. WHAT DID IT.

PLATTSBURG, N. Y., Jan. 21, 1892.
The Owen Electric Belt and Appliance Co., Chicago, Ill., GENTLEMEN:—I want to say that the
Owen Electric Belt, which I purchased of you last February, has done all that it was recom-
mended to do, and perhaps more. I have lent my belt for various diseases, and it has helped
in every case but one, and that man was my help.
I want to tell you what my belt done for one of my neighbors; Captain Parazo, a captain on
board of a ship, came home one day with a severe pain in his back, and he had to take his bed.
The pain was so severe he could not move. His wife came over and wanted my son to go at
once for some medicine, but I told her that I would try my belt on him. I did so, and in 30
minutes he got up, and the next day he went back on board of his ship. So much for a trial of
the Owen Electric Belt.
I am getting letters from all over the country inquiring just what the belt has done for me.
I have recommended the belt very highly, hoping those who try them will meet with the
same result as I have. I would not part with mine for a small farm, if I could not get an-
other.
Yours with respect,
H. H. SKEELS.

Fair Dealing and Prompt Delivery.

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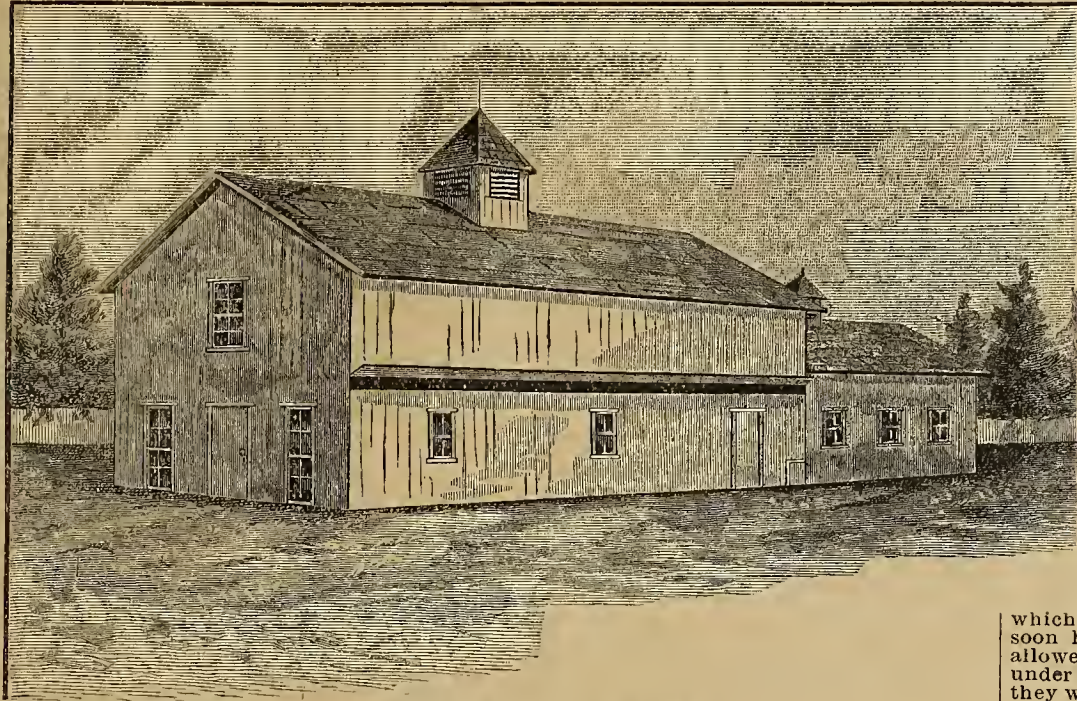
Our Farm.

THE POULTRY YARD.

Conducted by P. H. Jacobs, Hammon, New Jersey.

TWO-STORY POULTRY-HOUSE.

The design of the poultry-house illustrated in this issue is from Mr. Henry Price, Ohio, and in describing it he says: "I believe it is a model house,



TWO-STORY POULTRY-HOUSE.

and may be built of any size. The main building is 15x30 feet and the back building 15x15 feet. At first I had stationary boxes, and eggs could be taken out without going in among the hens, but when once I got lice in the house I saw the folly of stationary boxes. I then used boxes like illustration, which hang on the wall, or may be on the floor. If the box gets lousy carry it outside and burn the straw and refuse right in the box, as it is made of wire. The dusting-boxes are shown at A A (ground plan), and C C are the water dishes, B B, etc., the nest-boxes and D D the doors. The perches are on the upper floor, which is made of matched boards, and slanting to the front side of the elevation, where the droppings roll out, or may be swept out, through an opening running the whole length, and which may be closed by a board or door on hinges."

POULTRY AS INSECT DESTROYERS.

The hens, geese, turkeys, ducks and guineas perform more service in the destruction of insects than may be supposed. Not only are the insects sought on every spot where they may be hidden, but they are scratched up out of the ground, and brought to the surface. The guinea and turkey are destroyers of the insects that infest the fields, and a few moments observation will convince the farmer that they are valuable aids to him. The distended crop of a fowl will contain half a pint of the substances eaten, and in many cases a large proportion is of insects. The crop is filled several times during the day, and if we give credit to a large flock it will be noticed that many bushels are consumed in a week. All classes of poultry prefer insects to other foods.

KEEP DUCKLINGS FROM PONDS.

The safest plan with ducklings and goslings is to keep them from ponds until

FATTENING GROWING CHICKS.

A chick under three months old will not fatten readily, as nearly all the food consumed is devoted to growth. It will, of course, weigh well, but as the best prices are obtained when the broiler is fat, it is often desirable to have them in that condition. Nor is it an easy matter with some to judge when a chick is fat, even after it is killed and dressed. Keep

have had plenty of trouble with cholera. I have tried many remedies but to no avail. Finally I was told to use Epsom salts for cholera, but as we had none I concluded to try castor-oil. It gave the above results. I have been using it for some time. G. W. K. Decatur, Ill.

WHAT THIRTY HENS DID.—I started, March, 1891, with thirty Plymouth Rock hens, and ended, March, 1892, with fifty-four hens, twenty-four more than I started with, valued at \$8.00. I sold chickens to the amount of \$18.30, and sold 205 dozen eggs for \$27.00, an average of over thirteen cents per dozen. Total, \$53.30. Expenses for corn and chop, \$1.50, leaving a profit of \$48.80, besides chickens and eggs for our own use. J. B. Illinois.

DESTROYING TURTLES IN DUCK PONDS.—In your last issue I saw in the poultry department that "G. H. H." Brazleton, Kansas, wants information about turtles. I will tell how an uncle of mine worked them. He shut up his ducks, got his old flint-lock, and took a stand by the pond. Soon he saw a turtle with his nose and eyes out, taking observations. He raised his gun to shoot him, when suddenly the turtle dropped out of sight. Then he procured a rest for his gun and a seat for himself. Bringing his gun into position, he waited a few moments, till the turtle once more showed his head, when he fired, killing him. In this way he shot three. If "G. H. H." is raising ducks for profit he will do better to keep them from the pond, or any other water that is deep enough for them to float on. Give them plenty of water to drink, and feed them four times a day on mash in which there is one third shorts, and he will soon have ducks so heavy that if they are allowed a pond to swim in their tails will go under water. If allowed the pond a few days they will become light enough to float. Dartmouth, Mass. J. H. T.

INQUIRIES ANSWERED.

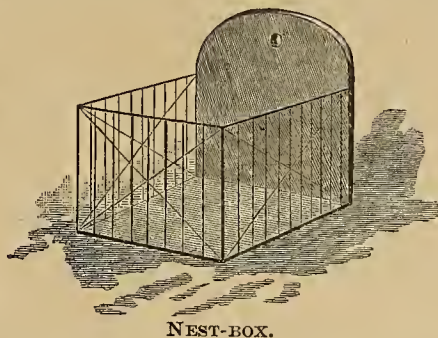
Bloody Eggs.—J. R., Winchester, Mass., writes: "I frequently find a fresh drop of blood in eggs. Please state the cause." **REPLY:**—Due to the rupture of a minute blood vessel during the progress of the eggs, especially when hens are very highly fed. It is not a serious matter and it will soon heal.

Egg-eating.—J. B., Schuyler, Neb., writes: "My Brown Leghorns eat their eggs. What can I do to prevent it?"

REPLY:—Make nests in a dark place, and have them ten inches off the floor, with tops, so that the hens must enter them from the front. As the hens cannot reach the eggs from the floor, and cannot well stand up in the nests, they will soon be cured of the vice.

Results of Overfeeding.—M. R., Winigan, Mo., writes: "My hens are dying. They become droopy, have fits, are fat, and the eggs have soft shells."

REPLY:—All of the difficulties are due to the hens being excessively fat; perhaps from feeding corn principally. There is no remedy but



NEST-BOX.

to turn them on the range and compel them to work for their food, withholding all grain until they are reduced in condition.

Roup.—Mrs. M. J. D., Oneida, Kan., writes: "My hens have sore mouths, with yellow membrane on the roof of the mouths, watery eyes, with sores on the head, etc."

REPLY:—It is probably roup. Anoint head with a few drops of a mixture of one part spirits turpentine and two parts sweet-oil. Sprinkle a pinch of chlorate potash in the mouth once a day. It is cheaper to destroy them, disinfect, and begin with healthy fowls.

Dubbing Games.—J. H. L., Memphis, Tenn., writes: "I have a game cockerel that has been dubbed once, but not sufficiently. Can it be cut again? What are the markings of the Derby Games?"

REPLY:—It may cause profuse bleeding if the operation is repeated, and it is better to abandon the intention of a second dubbing. The Derby Game is not now bred in its purity, and there is no standard of color or markings assigned for it.

Standard Weights.

—Mrs. E. J. P., Toulon, Ill., writes:

"What is the standard weight of Plymouth Rocks?"

REPLY:—Adult male, nine and one half pounds; hen, seven and one half pounds; cockerel, eight pounds; pullet, six and one half pounds.

Plymouth Rocks.

—Mrs. E. J. L., Ferndale, Cal., writes:

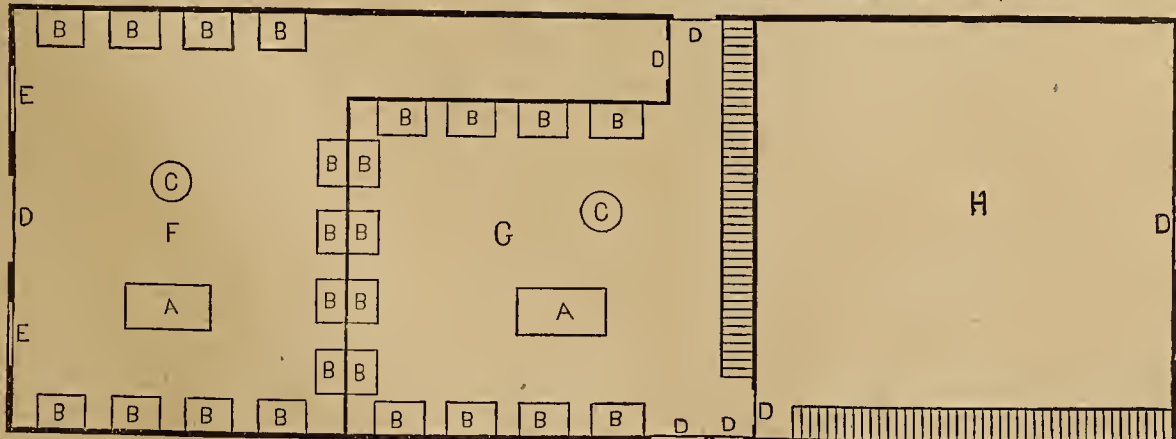
"Please describe a full-bred Plymouth Rock."

REPLY:—The plumage throughout is black and white bars, giving a bluish appearance to the color. The legs and skin are yellow, the legs being clean and free from the slightest signs of feathers below the knee. The comb is single, with five points. Pullets sometimes have a dark cast on the legs, but it passes away with age.

How Many Together.

—"Subscriber," Venice, Ill., writes: "1. How many males and females are allowed in a house 8x12 feet? 2. What size nests should be made for Plymouth Rocks? 3. Are White Wyandottes better layers than Plymouth Rocks?"

REPLY:—1. One male and ten hens make a flock of about the correct number. 2. A foot wide, the same in height and fifteen inches long will answer. A soap-box will make an excellent nest. 3. There is no advantage possessed by either over the other.



GROUND PLAN OF TWO-STORY POULTRY-HOUSE.

they become feathered. The cold water chills them, causing loss from colds or leg weakness. Have a dry place for the ducklings at night, giving them cut straw to sleep upon. They thrive best when they are supplied with plenty of green food, and one of the best foods for them is ground-oats moistened with milk.

Prescription free to all readers of the FARM AND FIRESIDE. First, catch the chicken (diseased) and place its body betwixt your knees, while kneeling on the ground, and then draw its head up high. With one hand open its mouth and with the other hand pour down its throat one tablespoonful of castor-oil. I think it is a sure cure. I have had to repeat the dose in severe cases, but the fowl gets well. I

D. A. MOUNT, Prince's Bay, N. Y., Breeder of White Turkeys, W. Guineas, Mammoth Pekin Ducks, P. Rocks, Lt. Brahmas, Ind. Games and W. Wyandottes. * Cir. free, giving prices and prizes won.

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Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Coal Ashes.—A. B. Olds, Mich., wishes to know the value of stone-coal ashes, compared with wood ashes, as a fertilizer. Unleached hard-wood ashes contain plant food, and are a good fertilizer; coal ashes are not. An application of coal ashes to heavy clay land may have a good mechanical effect, but they do not enrich it.

Greenly on Lettuce.—B. D. W., writes: "Some of my lettuce is large enough for market, but quite full of greenly. Is there any way to get them off without injuring the plants, or is there any way to keep them off?"

REPLY BY JOSEPH.—Spraying with strong tobacco tea or kerosene emulsion will kill these plant-lice. If you desire to keep them off, mulch the ground all around the plants with tobacco stems.

Welding Flux.—C. O. B., Coats, Kan. For welding iron and steel together, nothing is better than borax and skill. We do not know the recipe you refer to. The following is recommended: Calcine and pulverize together fifty parts iron or steel filings, five parts sal ammoniac, three parts borax, two and one half parts balsam copaiba. Heat one of the pieces to be welded red, carefully clean off the scale, spread the powder upon it, apply the other piece at a white heat, and weld with a hammer.

Plowing Clover Sod.—J. W. McK., Washington C. H., Ohio, writes: "Which is best for the land and crop this season, to turn under a crop of dead clover, or hurn it off before plowing?"

REPLY BY JOSEPH.—Burning the clover would be a waste of fertility, in removing the nitrogen and the carbon (which latter also might be of great service) contained in the dead stalks. Even if that is not much, I would prefer to save all there is in it, and consequently to plow it under.

Celery Growing.—Mrs. C. H. M., Tennessee, writes: "Please tell me how to make my celery grow upright without banking. It wants to spread out on the ground, and not grow upright."

REPLY BY JOSEPH.—The natural growth of celery is spreading, and you can make it grow upright by forcing it to do so. One way is to set the plants rather closely together, say six inches apart each way, on very rich ground. If planted in the usual way, the use of earth or boards is required to force upright growth.

Beans for Stock.—D. E. B., Ontario, Canada, writes: "Please tell me the worth of a bushel of beans for feeding stock, how to prepare them for feeding to milch, fattening or growing stock."

REPLY BY JOSEPH.—Beans are pretty heavy food for most stock, and must be given with caution. Sheep will eat them raw; for other stock, they should be cooked. Laying hens may be fed quite liberally with boiled or baked beans. For cattle and hogs you may try a small portion mixed and ground with other grains.

Onions from Sets.—Mrs. P. T., Colorado, writes: "Last spring I planted Yellow Danvers onion seeds for sets to use this year. These young onions, instead of drying off at the necks and making tiny round onions, kept the same size, bottom and necks. I cut the tops off, and have kept the bulbs through the winter. Will they raise good, salable onions?"

REPLY BY JOSEPH.—If the sets are in good condition for growing, they will probably make at least good bunching onions. I doubt their making sound, hard bulbs. Another time try Yellow Dutch for sets.

The Trench Method.—H. J. D., Hagers-town, Ind., asks what is meant by the "trench" method of planting potatoes. In Carman's "New Potato Culture" the trench method is described as follows: "A common plow may be used to form the trenches by plowing both ways, forming an open or dead furrow, or a sbevel or listing-plow may be used. Let the bottom of the trenches be ten inches wide at least. This bottom should be mellowed, and the seed potatoes placed one foot apart. Cover them with two inches or more of soil. Then apply the mulch (two inches of cut straw, wheat chaff, etc.), scattering it evenly over the surface soil of the trench, and then sow the complete potato fertilizer at the rate of five hundred pounds or more to the acre. Finally, fill the trench as lightly as possible with the return soil, and give level cultivation."

VETERINARY.

Conducted by Dr. H. J. Detmers, Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. DETMERS, 35 King Avenue, Columbus, Ohio.

Note.—Parties who desire an answer to their inquiries in this column, must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered under any circumstances. This time half a dozen anonymous inquiries found repose in the waste-basket.

Bog-spavin.—X. Y. Z. Consult recent numbers of the FARM AND FIRESIDE.

A "Lump."—A. W. B., Healdsburg, Cal. I cannot answer your question; the description is too indefinite.

So-called Sweeny.—J. W. W., Blanchard, Mich. Please consult answers given to similar questions in recent numbers of FARM AND FIRESIDE.

A Dead Colt.—C. N., Glencoe, Ohio. You ought to have examined the spinal cord when you made the post-mortem examination, and you would have found the seat of the trouble.

Garget.—E. M. O., Leonardsburgh, Ohio. What you describe looks like garget. The "lumps" in the udder and teats can be removed only by persistent, thorough and frequent milking.

Capped Knee.—S. Merrimac, Mass. What you describe is a capped knee, which as a rule does not yield to any treatment short of a surgical operation. But to make a wound in front of the fore knee of cattle is a very serious

thing. The reason "why" is evident to everyone who knows how cattle lie down and rise, and will not need any explanation.

Heaves.—C. A. A., Pepin, Wis. Heaves is an incurable disease. The animal will be more at ease when in pasture. No timothy hay should be fed. For further information consult recent numbers of FARM AND FIRESIDE.

Brain Trouble.—M. W., Hemlock Glen, N. Y. Your calf, it seems, suffered from an affection of the brain, probably caused by some external violence acting upon the skull. The subsequent blindness, very likely, was caused by a clot of blood pressing upon the optic nerve.

Lice on Sheep.—H. W. T., Taos, Mo. The best you can do is to shear your sheep as soon as possible, and then wash them with, or dip them in, a tobacco decoction. Persian insect-powder, dusted into the wool, provided a fresh and genuine article can be obtained, will also remove the lice.

Probably Cystworms.—G. W. S., Antwerp, Ohio. What you describe are probably cystworms, and most likely those known as Echinococcus, or, possibly, if the same were also found in the muscles, those known as Cysticercus cellulose, the larvae of the tapeworm, known as Tænia solium. If the muscles (that is, the meat) are free, the same, if properly cooked, may be used for human food.

Weak in the Back.—I. A. M., Forest City, Ill. Maybe your mare has two colts again. Let her have some voluntary exercise, and feed her concentrated, not too voluminous food; at any rate, feed but little hay and more grain, and perhaps everything will turn out well. If her bowels should be constive, give now and then a bran mash. If she gets as bad as before, you had better exclude her from breeding.

Slight Attacks of Vertigo.—C. A. V., Filcher's Point, La., writes: "Can you tell me what ails a horse that after being driven a few miles will draw one long and two short breaths, and shows slight signs of staggering? The animal is a fine one, and is well fed with corn and hay."

ANSWER.—What you complain of seems to be slight attacks of vertigo. Maybe the collar don't fit.

A Gall.—C. D. B., Miller, Neb., writes: "I have a five-year-old horse that has a large, soft swelling on the front part of the pastern-joint. It does not grow any larger or cause lameness. I first noticed it about nine months ago. What will remove it?"

ANSWER.—Such a gall, or large, soft swelling as you call it, is not easily removed by any treatment; therefore, as it does not cause any lameness, it will be just as well to leave it alone.

Maybe Salivated.—J. H. S., Russell, Pa., writes: "I have a two-year-old heifer that has run down in flesh. She has a good appetite. At night when she lies down a kind of watery substance runs from her mouth."

ANSWER.—Maybe that you have used mercury in some shape or form on your heifer, and that the latter is salivated. Else the source of the trouble is, very likely, to be found in damaged food; for instance, musty or dusty clover hay.

Ticks on Sheep.—B. G., Rogersville, Mich., writes: "Your answer to my request of what would remove bone spavin from my horse's leg proved very good. I wish to get from you a recipe for killing ticks on sheep."

ANSWER.—The best way is to shear the sheep, and then put on each tick that is found a drop of oil or a little diluted benzine. Ticks should never be pulled out, because the head will tear off, remain in the skin and cause a small ulcer.

Garget.—O. L. R., Maiden, Mont., writes: "I have a cow that gives very strong milk. She gives very little milk, and there are lumps and strings of thick material. I believe the cow is in calf, but not so far gone as to cause drying up. She has had plenty of good hay and water all winter, and a few potatoes and salt every week."

ANSWER.—If you desire to save the udder of your cow, the clots, or what you call lumps and strings of thick material, must be removed by frequent and vigorous milking.

Lice.—H. S., Fremont Center, Sullivan county, N. Y. Lice will not be permanently removed by any wash, unless the stable or premises where the lousy animals are kept are, at the same time, thoroughly cleaned. Feed your colt well with good, nutritious food, clean your stable, or, as there will soon be an abundance of new grass, turn your colt out into a good pasture, and the lice will disappear as soon as the colt sheds its coat of hair and gains in flesh. A tobacco decoction is very effective, provided it is properly applied, and the animal is kept in a place not infested with lice.

Defective Milk.—R. M., Mount Victory, O., writes: "What is the matter with my cow? Her milk cannot be churned. I have tried again and again. I have never had any trouble with her milk before. She is seven years old, is healthy and is fed on corn and fodder. She had a calf last spring, and is with calf now."

ANSWER.—There is probably nothing the matter with your cow. Consult a recent number of FARM AND FIRESIDE, in which a similar question has been answered. Still, if your cow is due to calve in June, it will be about time to let her go dry.

Millet.—C. A. R., Claremont, S. D., writes: "I would like your opinion on the effect of millet hay on horses. There have been several horses, most of them mares and some with foal, that have died here this winter. The veterinarian from Aberdeen lays it to the millet. He says that they were stopped up in the passage just back of the stomach. The hay was cut before it was ripe. Is it best ripe or before it goes to seed?"

ANSWER.—Millet, especially when ripe or nearly ripe, contains too much cellulose, and therefore too much indigestible matter to make it a suitable food for horses. Your veterinarian is about right.

Scars Caused by Burns.—T. R., Westminster, Cal., writes: "I have a horse that was, about five months ago, accidentally burned on the back part and side of near fore leg between hoof and knee-joint. The leg is swollen and the swelling does not seem to get less. There is no pus, but a kind of hard, dry scab."

ANSWER.—The hard, dry scab you complain of is probably an extensive horny scar, such a one as is always left behind if extensive wounds below the knee have caused loss of substance, or have suppurated and healed by second intention. You will have to take up with it. The swelling may possibly be somewhat reduced by judicious bandaging.

Probably Worms.—H. J. T., Sylvia, Kan. Your colt, it seems, suffers from chronic indigestion, and is probably full of worms. Since spring is approaching, the best advice I can give you is to give your colt, at least during the day, the benefit of a good, dry pasture, and, as long as the weather is apt to be boisterous, to keep the same during the night in the sta-

ble, and feed it night and morning a feed of good oats. On account of the poor condition of the animal it is hardly advisable to attempt to expel the worms by means of medicines. By all means avoid to drench the colt with oil. It is not only dangerous, but it also thoroughly spoils its appetite, and disturbs its digestion.

Brain Disease.—P. E. D., Bradford, Tenn., writes: "Please tell me what is the matter with my cow. The cow has been drooping about for a week or more, refusing to eat. This morning she was standing in the corner of the lot, and all at once dropped down; she has something like spasms, draws her head back so far that her horns nearly touch her back, groans, kicks and rolls her eyes. I had her horns bored with a small gimlet about one inch from the edge of the hair; they were as hollow as gourds and very cold. She cannot stand up when she is helped up."

ANSWER.—Your cow, it seems, is affected with some brain disease, possibly caused by the presence of one or more cystworms, Cœnurus cerebralis, in the brain. When this reaches you, she, very likely, is dead and buried. The horns of cattle are always hollow.

Not Thrifty.—J. H. M., Mifflintown, Pa., writes: "I have a cow, and I would like to know what is wrong with her. She was fresh about two months ago. She gets five quarts of chop at a feed, and eats it up clean, but will not eat her hay or fodder. She has chills and shakes all over, and is getting poorer. Is she being hidebound?"

ANSWER.—Being hidebound is a result or concomitant of poverty, no matter whether the latter is caused by disease or a want of good care and sufficient food. The statement that the animal has chills and shakes all over must be taken as an indication that the same is diseased, but the nature of the disease cannot be determined from your communication. Maybe that the animal did not clean when she became fresh, and that her poverty, want of appetite, etc., is due to that, but you do not say so, and so I can only give a hint and cannot decide what ails your cow.

Swine-plague.—F. M., Ida Grove, Iowa, writes: "Can you tell me what is the matter with my young pigs? They become stuffed up in the nose, so they have to breathe through the mouth. In a few days the mouth gets sore so they cannot suck, and pieces of flesh will drop off, the smell being very offensive. They live from two to six weeks. My pigs were affected the same last year, and I lost over thirty. Not one got well. They have good, comfortable quarters to sleep in. Is the disease contagious, and is there any preventive or cure?"

ANSWER.—Your pigs are affected with swine-plague. They probably have been ringed, and thereby the morbid process has been induced to localize in the nose. Those not seriously otherwise affected, may possibly be saved by timely application of a five-per-cent solution of carbolic acid to the sore parts. If you desire to prevent a recurrence of the disease, you will have to thoroughly cleanse and disinfect the premises, to burn all old straw and other rubbish, to drain and dry all pools of stagnant water, to keep your pigs away from any place where the disease is or has been prevailing, to prevent a reinfection of your premises by other diseased animals, and to avoid ringing and otherwise wounding your pigs.

Bloody Milk.—M. C. McC., Richmond, Ind., writes: "My cow had her calf one week ago last Wednesday, and got along all right every way. Her milk, after standing awhile, shows blood in the bottom of the vessel. One side of her udder seems hard, and larger than the other, yet it doesn't seem caked. She has been milked regularly, and the last two days have milked her at noon, too. Two years ago, when she had her last calf, there was trouble with one teat, but that passed off and she milked right on the two years up till four weeks of this calving time, and her milk was all right. We thought she milked so nicely this time and that teat would be no trouble; and now this trouble has come up, and we are quite discouraged. It looks like there may be a teaspoonful in two quarts of milk, and it settles in the bottom of pan. It doesn't seem to increase—sometimes less than others. We have been feeding her bran mash and clover and timothy hay and a little corn."

ANSWER.—What you complain of is probably due to the rupture of a few small blood-vessels, and, very likely, will soon disappear. Nothing can be done by way of modification without danger of doing more damage than good. Gentle, and at the same time, thorough milking is essential.

A So-called Malignant Wart.—C. B. K., Perth Amboy, N. J., writes: "A young mare has a growth on pastern-joint, right front leg, outside, caused first by stumbling, we thought. A veterinarian cut it out last summer, when it was the size of a trade dollar, but never cauterized it or applied anything. On reappearance I used iodine, then ultric acid. The fibrous roots, which can be seen like pipes, discharge a heavy virus, and then it scabs over."

ANSWER.—What you inquire about seems to be a so-called malignant wart. Although the treatment has been fully described some short time since in these columns, I will briefly repeat it. As the mixture to be used is exceedingly poisonous, it must be handled and applied only with the greatest care and by a responsible person. Take half an ounce of arsenious acid, two drams of caustic potash, half an ounce of gum arabic and an ounce and a half of water; mix thoroughly, and put in a salt-mouthed bottle. Then take a flat stick of the shape of a spatula, and with it apply some of the mixture, just enough to form a thin coat on the surface of the wart, but nowhere else, and on top of it press a small tuft of absorbent cotton, just enough to cover the wart. If the wart is comparatively small, the coat of mixture put on, of course, must be thin, and vice versa.

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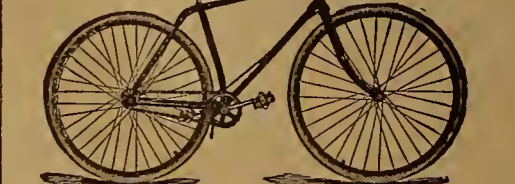
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Our Miscellany.

CLOUDS continue to form around storms in a continuous sheet, thickest near the center of the storm, and thinnest and highest at its outer limits. The temperature is high in front of storms and low in their rear. The first indication of an approaching storm are the finely-drawn-out, fibrous clouds, which may be one hundred miles in advance of the storm.

HOW ABOUT THE PRUDENCE of allowing a Cough to run on, rasping the Pulmonary and Bronchial organs, when that approved and speedy remedy, Dr. D. Jayne's Expectorant, can be obtained from any Apothecary.

A MAMMOTH cave like that of Kentucky has, we learn, been discovered in Josephine county, Oregon. It contains many beautiful galleries adorned with translucent stalactites and milk-white columns of alabaster, and diversified with ponds, streams and falls of clear water, one of which is thirty feet high. It was explored for several miles and traces of bears were found inside.

THE tables of insurance companies show that the average expectation of life has been raised during the past two hundred years, owing to the more improved methods of living and increased skill with which science deals with disease, preventing great epidemics. But against this must be placed the large increase of urban population during the past seventy-five years, and the much greater mortality caused by the rush and hurry of city life.

FRIENDSHIP is generally abused by those who profess it. It is too often supposed to carry with it an official right to that kind of candor which is always insolence. There can be no greater mistake. The more intimate our relations are with any one, be it in friendship or love, the less should we strain the opportunity to say impertinent or disagreeable things. Intimacy does not absolve from courtesy, though it is so often separated from it by unwisdom and the impetuosity of human nature.—Ouida.

Good drainage is the first essential of good roads. All the crushed stone, gravel, plowing and scraping are of not much use unless there is good drainage, natural or artificial. At this season many roads are settled and dry in places, except for spring holes, which are caused by water in the soil beneath the road-bed. Roadmasters should put their first efforts to draining, for without a good foundation all subsequent efforts are of much less value. A road that is otherwise good is often spoiled by loose stones. Nothing will injure a horse so quickly as stepping on a round, rolling stone. They should be raked off at once.—New England Homestead.

BECAUSE much of the food given hogs is in liquid form, it is a common idea that additional water is unnecessary. This is a great mistake. Milk is not drink, but food, as any one may see by curdling it. In the stomach, the first process of digestion is to turn milk into a solid by curdling it. If dishwater is added to milk it contains a good deal of salt, too much to make it serve the purpose of a drink. This is especially true of growing pigs and breeding sows. Lack of pure water makes the sow feverish and restless. It is often the cause of the mania that leads the sow to devour her own offspring.

ON the German seed-farms labor is very cheap. The average wages of a working-man is from seven to nine shillings a week, and for this he works from five in the morning to seven in the evening, and in winter one hour less, commencing at six instead of five. In summer the hands are employed in the seed-grounds, and during the winter months in the warehouses cleaning and dressing seeds. Much of the lighter field work, such as hoeing, cleaning and gathering seed, is done by women and girls, who work in gangs under the charge of a foreman. They are very expert in the use of the hoe, and get over nearly as much ground as a man. They earn from tenpence to one shilling per day, and many have to walk several miles to and from work, as the majority live in the surrounding villages.

LARGE BARN.

IN FARM AND FIRESIDE of January 1st and February 15th, I read accounts of large barns. On a 575-acre farm fronting on the James river and in full view of the city of Richmond, Va., are two stock barns. One is in the shape of a cross 172 feet each way, with space for 120 cows, 1,000 tons ensilage and 500 tons hay. The other is 96x100 feet and has room for 112 cows. These barns are fitted up with all the improved machinery to carry on a large dairy, from a steam thrasher down. It is said that the farm can be made to produce twenty-one thousand dollars' (\$21,000) worth of milk each year.

Virginia.

"DON'T TOBACCO SPIT YOUR LIFE AWAY" Is the name of a little book that tells all about *Notobac*, the only guaranteed cure for the tobacco habit in every form. This book is mailed free. Contains many testimonial letters, reporting cures in ten days and a gain of as many pounds. *Notobac* costs but a trifle, and the man who wants to quit and can't had better write for the book to-day. Address STERLING REMEDY Co., Box 566, Indiana Mineral Springs, Ind.

Recent Publications.

NOTES ON BEAUTY, VIGOR AND DEVELOPMENT. An interesting and useful pamphlet on personal hygiene. Price 10 cents. Fowler & Wells, 777 Broadway, New York.

HOW TO PLANT A PLACE. A brief illustrated guide, suited to popular use. By Elias A. Long, the well-known writer, practical grower and skillful landscape gardener. Price 20 cents. Rural Publishing Company, New York.

THE BUSINESS HEN. A condensed and practical encyclopedia of profitable poultry keeping, made up of special articles by P. H. Jacobs, Henry Hall, James Rankin and others equally well known. Price 75 cents. Rural Publishing Company, New York.

FARMING CORPORATIONS. The aim of this book is to show farmers and other producers how to organize themselves successfully after the example of the successful; how to manage the wealth created by their own labor, and how to retain the proceeds of their exertions long enough to make their own bargain for the comforts they wish to get in exchange, and to determine on the distribution of the surplus. Price \$1. For sale by the author, W. Aldrich, 120 Broadway, New York.

CATALOGUES RECEIVED.

Fruit-tree catalogue. Ramsey's Nurseries, Mahomet, Texas.

Catalogue and price list of pumps and hay tools. F. E. Myers & Bro., Ashland, Ohio.

Descriptive catalogue of Kissena Nurseries. Parsons & Son's Co., Flushing, New York.

Illustrated catalogue of pianofortes. Mason & Hamlin Organ and Piano Co., Cambridgeport, Mass.

Descriptive catalogue of Porter's perpetual steam evaporator. Densmore Brothers, Red Wing, Minn.

Howe's Potato Manual is full of useful information to potato growers. G. D. Howe, North Hadley, Mass.

Illustrated catalogue and fancier's manual of high-bred poultry. Dalbey Bros., Washington C. H., Ohio.

Gardner's Garden Gems for 1892. John Gardner & Co., seed growers, importers and dealers, Philadelphia, Pa.

Catalogue of seeds and agricultural implements. The Geo. L. Squier Manufacturing Co., 189-195 Water St., New York.

Descriptive circular of high-class fowls, of new breeds and illustrations of White Plymouth Rocks and Golden Wyandottes. J. C. Harris, Venango, Pa.

Catalogue of Champion grain-thresher and clover-huller, low-down grain and rice threshers, portable and traction engines, horse-powers, sawmills, etc. Orrville Machine Co., Orrville, Ohio.

General catalogue of the Mount Hope Nurseries. A manual and hand-book for farmers, gardeners, florists, fruit-growers, park superintendents, landscape gardeners and every cultivator in the land. Ellwanger & Barry, Rochester, N. Y.

Descriptive catalogue of ornamental trees, shrubs and climbing vines. Catalogue of large and small fruits, describing full collection suited to New England. Illustrated catalogue of recently introduced ornamental trees, shrubs, vines, hardy perennials, etc. Reading Nursery, Reading, Mass.

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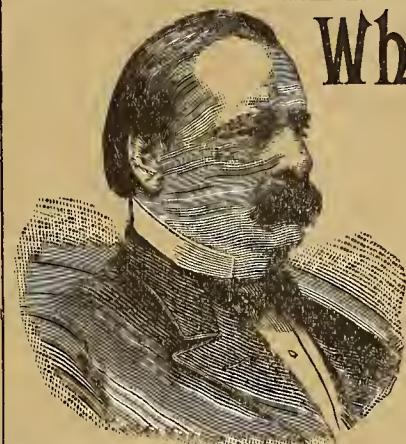
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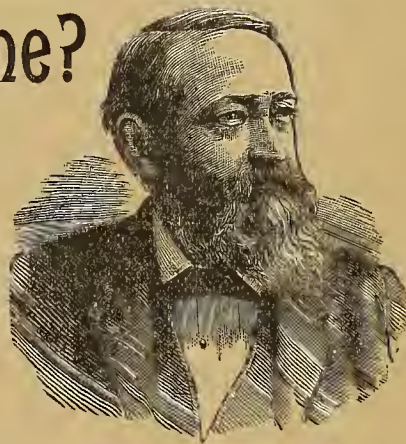
AGENTS

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It occupies a space 25 feet by 14 feet, in the *Metropolitan Art Museum, in New York City*, having been presented to that institution by Mr. Maurice K. Jesup, a wealthy resident of New York. *The reproduction will be a Magnificent Oleograph, in which every detail, expression and original color is shown as perfectly as in the original painting.* The supreme moment in the life of Christopher Columbus as he stands before King Ferdinand and Queen Isabella, in the Royal Court of Spain, is the subject of this

DESCRIPTION OF THE PICTURE.

The scene which the picture portrays was enacted in the Court of Spain before Queen Isabella and King Ferdinand. The picture shows Christopher Columbus explaining his theories in support of his belief in the existence of a western continent and pleading for sufficient means and support to enable him to make a voyage of discovery. He stands, one of the prominent figures in the picture, addressing the Queen and assembled members of the court, his face showing plainly his intense earnestness and his burning desire to impress his hearers with the benefits and honors that would accrue from the success of such an expedition. The other equally prominent figure is the beautiful Queen seated a little above and surrounded by her lords and ladies. Her attitude shows plainly her deep interest in the words of Columbus, she is leaning slightly forward as though fearing to lose some of his remarks. The beauty and interest of the scene is greatly heightened by the approach of an attendant bearing the costly jewels that the queen had just offered to pawn for the necessary funds to equip the ships for an expedition. She assumed the undertaking in her own name and in her own right. The commanding figure of Columbus, the queenly beauty of Isabella, with her womanly sympathy clearly expressed in her countenance, the sparkling jewels, and the other personages grouped about make a rare subject for an artist's brush—a subject demanding the work of a master hand. It is fortunate that it fired the artistic genius of such an artist as M. Brozik, who has given to the world a picture that will perpetuate both his name and the scene which he has so graphically drawn.

THE ARTIST.

Vacslav Brozik, the artist to whose magic pencil we are indebted for this faithful representation of the first act in American history, was born at Pilsen, Bohemia, in 1852. As soon as he could handle a pencil he began to draw. His evident talent induced his relatives to make him an artist. He studied at the Academy of Art, in Prague, under the foremost living artists, Piloty and Munkacsy. His pictures soon began to attract attention, and brought him great fame and honor. His name was heard in all art circles, and lovers of art made long journeys to study his pictures. Brozik is not unknown in America. Many of his small pictures grace the private collections of American art-lovers.

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The attention of the whole civilized world is being attracted to the subject by the Columbian Exposition, or World's Fair, as it honors and pays tribute to the memory of the great discoverer.

The work is in the hands of the best and most skillful artists in the country, who promise to give us the pictures about May 1st. As this page goes to press about fifteen days before the date of our journal, we cannot yet report any of the pictures on hand, but hope in our next issue to report them ready. The artists assure us that our reproduction will be unsurpassed in artistic merit by any work of this character ever done. Plain, uncolored copies of this famous painting have recently been issued, and dealers in some of the large eastern cities are

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QUEEN ISABELLA.

To Queen Isabella Columbus was directly indebted for the means, the men and the ships to fit out his expedition of discovery. Her support of the undertaking stands out in marked contrast to the timidity and doubting of many of her advisers, who could see nothing but the imaginings of a dreamer in the theories of Columbus. She was exceedingly beautiful—"the handsomest lady and the most gracious in her manners of any one whom I ever beheld," says one of her household. Her complexion was fair, her hair of a bright chestnut color, and her mild blue eyes beaming with intelligence and sensibility. A portrait still existing of her in the royal palace is conspicuous for an open symmetry of features, indicating her natural serenity of temper and the beautiful harmony of intellectual and moral qualities that so signally distinguished her. She was dignified in demeanor and very modest, even to a degree of reserve, yet her nobleness of heart and mind made her beloved unto all her subjects and almost worshiped by those who were in her personal favor. Whether considered as she rode about through her kingdom, as she was wont to do, much of the time on horseback, or among the lords and ladies at her court, with all its magnificent surroundings, or at the head of her armies, leading and cheering them forward as none of their mighty generals could do, she was always the same generous, true and lovable woman—a leader of her people. Such a woman it was who undertook this enterprise, which had been explicitly declined by other powers, and who, against opposition from her own advisers, said: "I will assume the undertaking for my own crown of Castile, and am ready to pawn my jewels to defray the expenses." It was thus she expressed herself after hearing the proposals of Columbus and seeing them in their true light, one point of which, the carrying of the gospel to the new and undiscovered country, had a great influence upon her. No sooner had she given her support to the project than she prepared to forward the preparations with all her characteristic promptness and enthusiasm, and she remained true to her agreement with Columbus during his several voyages and until her death. This beautiful queen is one of the prominent figures in the picture, and the honor of the discovery of America is justly shared by both Queen Isabella and Christopher Columbus.

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Will grind from fine flour to hominy. Adjusted in a moment. With this mill the farmer is independent of the grist-mill, which may be miles away. It is especially adapted for grinding corn, wheat, coffee or grain of any kind for domestic use or feeding purposes. Corn-meal, Hominy, Graham Flour produced fresh and pure in your own home. The grinding surfaces are made of very hard material, ground perfectly true, and the shaft is of steel. The mill is light running—can easily be operated by a child.

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Price, including one year's subscription to either paper, \$4.

We offer it for sale for \$3.75. Carefully crated and shipped by freight, unless otherwise ordered, receiver to pay charges, which will be small.

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Don't throw away your umbrella because the cover is torn. The handsome handle and the frame may be sound, and it can be recovered and made as good as new with one of our detachable covers. They can be adjusted in a few minutes by any one, without sewing or cutting.

The goods are equal in quality to that on new umbrellas.

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Premium No. 60, Cleanfast Gingham Cover, given for 5 subscribers to either the Farm and Fireside or the Ladies Home Companion.

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Full size 12½ inches long.

Premium No. 40.

Perfection at last. The best and simplest sharpener ever invented. The cutting surface is made of the hardest mineral known, and with it, scissors, bread-knives, carvers, chopping-knives, and every cutting instrument in the house can be easily kept in condition. This is undoubtedly the most practical article for the purpose that is made.

During the next 30 days this Emery Knife and Scissor Sharpener will be given as a free present to any one paying 50 cents for one year's subscription to the Farm and Fireside or Ladies Home Companion. If you are already a subscriber you can have your subscription advanced one year by accepting this offer.

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By "JOSIAH ALLEN'S WIFE."

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NAMES OF PRIZE WINNERS.

For the Week Ending April 2d, 1892.

B. F. Bosserman, Middletown, Mich., was awarded his choice of First Grand Prizes offered, for sending 46 subscribers, the largest club received during the week.

C. A. Frost, New Haven, Ct., was awarded his choice of the Second Grand Prizes offered, for sending the second largest club, 28 subscribers.

For the Week Ending April 16th, 1892.

Ronson German, New Baltimore, Mich., was awarded his choice of First Grand Prizes offered, for sending 46 subscribers, the largest club received during the week.

W. M. Mathis, Raleigh, Ill., was awarded his choice of the Second Grand Prizes offered, for sending the second largest club, 23 subscribers.

For the Week Ending April 9th, 1892.

L. A. Winston, Reidsville, N. C., was awarded his choice of the First Grand Prizes offered, for sending 10 subscribers, the largest club received during the week.

Willie A. McGilivray, Bayonne City, N. J., was awarded his choice of the Second Grand Prizes offered, for sending the second largest club, 8 subscribers.

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Prem. No. 813.

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SAVE MONEY. ERECT THE BEST BUILDINGS AT LEAST COST.

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A \$2,000 DWELLING.

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No tools required. Only a hammer needed to drive and clinch them easily and quickly, leaving the clinch absolutely smooth. Requiring no hole to be made in the leather nor burr for the Rivets. They are **STRONG, TOUGH and DURABLE.** Millions now in use. All lengths, uniform or assorted, put up in boxes. Ask your dealer for them, or send 40c. in stamps for a box of 100; assorted sizes.
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Has no rival. Loads a Ton of Hay in 5 minutes. Gathers clean. Loads loose Grain or green Clover. —Over 14,000 in Use.—
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BE HAPPY WHILE YOU LIVE, FOR YOU WILL BE A LONG TIME DEAD
To be Happy buy a **DANDY STEEL MILL AND A DANDY STEEL TOWER.**
With graphite boxes the Dandy Wind Mill requires no oil for years, therefore no more climbing towers, no more tilting towers to break down and injure you or your cattle. Needs no attention and is warranted to last longer than other mills that are oiled, and will be sent in good parties on 30 Days Test Trial. If not satisfactory freight will be paid both ways. The Dandy Steel Tower is a Four Corner Tower, the corners being made out of heavy angle steel. The girls and braces are very strong and substantial, and of the very best steel made. It is the most graceful, strong and durable tower on the market, and can be erected in one-half the time of a wooden tower. We will not allow ourselves to be undersold.
Challenge Wind Mill & Feed Mill Co., Batavia, Kane Co., Ill.

BUCKEYE SPRAYING PUMPS,
Also **BUCKEYE Force and Lift Pumps, COLUMBIA Steel & Iron Turbine Wind Engines, STEEL DERRICKS, Iron Fence, BUCKEYE Lawn Mowers, &c.** Send for circular
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This is Our Guaranteed **\$55.00** **BUGGY.**
We sell direct to YOU and save you big Dealer's profit. Our \$55.00 Buggies, \$66.50 Phaetons, \$97.50 Surreys, \$11.50 Road Carts, \$5.95 Harnesses and \$53.50 Farm Wagons are used everywhere. Livemen in all parts of the United States use our goods. EVERY JOB FULLY GUARANTEED.
Refer to Commercial Agencies or any Bank here. Write for catalogue and mention this paper.
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but no "ward healer" need apply. He must be responsible, reliable and "one whom the people delight to honor." No matter how high his standing, an agency for the Coiled Spring Fence will do him honor. His brother farmers will speak of him as a **BENEFACTOR.** Write for particulars.
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45 sold in '88
2,288 sold in '89
6,268 sold in '90
20,049 sold in '91
60,000 will be sold in '92
A Steel Windmill and Steel Tower every 3 minutes. These figures tell the story of the ever-growing, ever-going, everlasting **Steel Aeromotor.** Where one goes others follow, and we "Take the Country." Though sold, we were unable to make all of the 20,049 Aeromotors in '91. Orders often waited 8 weeks to be filled, but now we have vastly increased our plant and have prepared promptly to plant our increase in every habitable portion of the globe.
Are you curious to know how the Aeromotor Co., in the 4th year of its existence, came to make many times as many windmills as all other makers combined? The answer is simple. We came to originate the Steel Wheel, the Steel Fixed Tower, the Steel Tilting Tower?
1st. We commenced in a field in which there had been no improvement for 25 years, and in which there seemed no talent or ambition, and none has yet been shown except in feeble imitation of our inventions.
2d. Before commencing the manufacture, exhaustive scientific investigation and experiments were made by a skilled mechanical engineer, which showed over 5,000 dynamometric tests were made on 61 different forms of wheels, propelled by artificial and therefore uniform wind, which settled definitely many questions relating to the proper speed of wheel, the best form, angle, curvature and amount of sail surface, the resistance of air to rotation, obstructions before the wheel, such as heavy wooden arms, obstructions before the wheel, as in the vaneless mill, and many other more elaborate, though not less important questions. These investigations proved that the power of the best wind wheels could be doubled, and the **AEROMOTOR** daily demonstrates it has been done.
3d. To the liberal policy of the Aeromotor Co., that guarantees its goods satisfactory or pays freight both ways, and to the enormous output of its factory which enables it to furnish the best article at less than the cost of the material. For 32 we furnish the most perfect bearings ever put in a windmill, and have made an exhaustive revision of the Aeromotor and Towers.
If you want a strong, stiff, Steel Fixed Tower—or if you want the tower you don't have to climb (the Steel Tilting Tower) and the Wheel that runs when all others stand still, that costs you less than wood and lasts ten times as long (the Steel Aeromotor) or if you want a **Coiled Spring Fence**, grind, cut feed, pump water, turn grindstone and saw wood, that does the work of 4 horses at the cost of one (\$100), write for copiously illustrated printed matter, showing every conceivable phase of windmill construction and work, to the **AEROMOTOR CO.,** 12th and Rockwell Sts., Chicago, Ill. and 23 Beale St., San Francisco.
Mention this paper when you write.

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BRANCH HOUSES: PHILADELPHIA, PA.; PEORIA, ILL.; KANSAS CITY, MO.; OMAHA, NEB.; SAN FRANCISCO, CAL.; ST. PAUL, MINN.

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The Hartman Steel Picket Fence
Costs no more than an ordinary clumsy wood picket affair that obstructs the view and will rot or fall apart in a short time. The Hartman Fence is artistic in design, protects the grounds without concealing them and is practically everlasting. ILLUSTRATED CATALOGUE with PRICES and TESTIMONIALS Mailed FREE.
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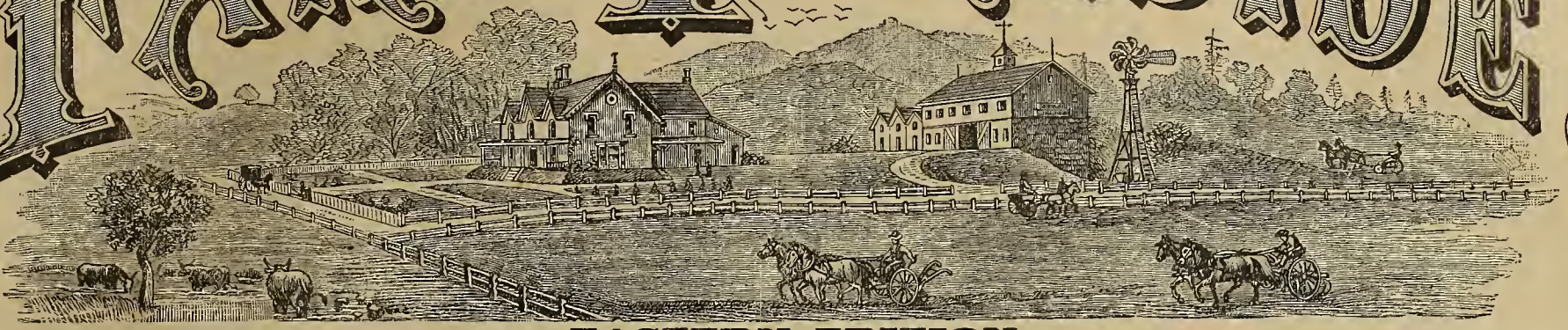
The Dairy Sweepstakes, The Creamery Sweepstakes, THE GRAND SWEEPSTAKES, and the GOLD MEDAL.
Was awarded to Butter Made by the **COOLEY CREAMER PROCESS.**
At the annual meeting of the Vermont Dairymen's Association, Jan. 12th to 14th, 1892. Is not this a grand victory, there being over seventy competitors; the three judges stating that it was the finest lot of winter butter they ever saw. This makes the **23d GOLD MEDAL** awarded. No system can compare with the Cooley Creamer. Send for Full Illustrated Circulars.
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SPRAY YOUR FRUIT TREES AND VINES
Wormy Fruit and Leaf Blight of Apples, Pears, Cherries, Grape and Potato Rot, Plum Curculion prevented by using **EXCELSIOR SPRAYING OUTFITS.**
PERFECT FRUIT ALWAYS SELLS AT GOOD PRICES. Catalogue showing all injurious insects to fruits mailed free. Large stock of Fruit Trees, Vines, and Berry Plants at Bottom Prices. Address **Wm. L. STAHL, Quincy, Ills.**

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Presses for all purposes; also general cider makers' supplies.
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EVERY farmer who writes us this month will get an offer so low that it will astonish who receive it. Don't lose this chance. Address, **Delaware County Creamery Co.,** Benton Harbor, Mich.
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FARM & FIRESIDE



EASTERN EDITION.

VOL. XV. NO. 16.

PHILADELPHIA, PA., and SPRINGFIELD, OHIO, MAY 15, 1892.

TERMS 50 CENTS A YEAR.
24 NUMBERS.

The Circulation of FARM AND FIRESIDE
this issue is

251,200 COPIES.

The Average Circulation for the 24 issues of
the last 12 months has been

273,145 COPIES EACH ISSUE.

To accommodate advertisers, two editions
are printed. The Eastern edition being
100,500 copies, the Western edition
being 150,700 copies this issue.

Farm and Fireside has More Actual
Subscribers than any Agricultural
Journal in the World.

Current Comment.

A RECENT bulletin of the Ohio agricultural station, after giving the cost of raising an acre of beets at the station as \$44.84, says:

"Considering the low percentage of sugar found in the beets grown at this station, the outlook is certainly quite unfavorable for growing beets in this state at a profit. Unless the sugar content can be more than doubled, the growing of beets for profit must depend, not so much upon what the sugar in the beets is worth, as upon what we can get per ton for them delivered at the factory. The evidence given here is not sufficient proof that sugar-beets cannot be grown at a profit in Ohio, but it does point out some facts which are worth considering before going into the business. Granting that we can grow thirteen tons to the acre (which is entirely possible), if our percentage of sugar should not average above 6.5, then our beet crop, according to prices previously given, would not bring to exceed \$2.50 per ton, or about \$32 per acre, and this falls below the cost of production.

"The possibility of profitable culture of the sugar-beet for sugar-making purposes in the northern third of Ohio is not yet determined, and if farmers in this region will cultivate a small lot of such beets during the coming season and send samples of the crop to this station in October or November, together with a statement showing the kind of soil upon which they were grown, the percentage of sugar will be determined free of charge."

There has been considerable talk in different parts of the state about raising beets for sugar and erecting large sugar factories. But the results of the experiments made at the station the past two years are, to say the least, not very encouraging. The experiments will be continued, however, and the station will assist growers to determine whether or not the beet-sugar industry can be made profitable in this state.

IN an article on the eight-hour question in the *Popular Science Monthly* appears the following:

"Let two men start together in life as shoemakers, with a view to do their best in getting on in the world, as Henry Wilson did sixty years ago. They are equal in skill and endurance and can work twelve hours a day at a fair stroke without impairing health. Working by the piece, they find they can earn sixteen and two third cents an hour, or at the rate of two dollars a day. There is no difference between them in purpose, and only the small difference in the method in getting on, that James thinks he will sooner get in comfortable circumstances by working

twelve hours a day, and John imagines that nine hours will answer the purpose just as well. At the end of the year of three hundred days they find that James has earned six hundred dollars, and John but four hundred and fifty dollars. They keep on at this rate ten years, and James has laid by two thousand dollars, and John nothing. Now the two thousand of James earns ten dollars a month for him, and is better than a good apprentice, because he pays the fund no wages and it costs nothing for board. The reason why they are now so wide apart is that the extra hours of James have yielded fifteen hundred dollars principal in the ten years, and five hundred dollars in interest. John has nothing, because the expense of living of each and support of the families has amounted to four hundred and fifty dollars for each. In ten years more James will have interest money sufficient to meet the family expense of four hundred and fifty dollars, and John will be with his nose still on the grindstone."

Though aptly applied to a different subject, no more forcible illustration could be made of the wisdom of small savings of money by wage earners. Change the illustration a little and suppose that each earns six hundred dollars a year. Let James save fifty cents a day and let John spend all his earnings. In twenty years the result will be the same. The accumulated savings of James will then bring in an income that will support himself and family. In case of his sickness, inability to continue work, or death, his family will not be without means of support. With John the case is entirely different. If disabled for work at any time, he immediately becomes dependent on the labor of others. It is right to be not over-anxious for the morrow, but he that taketh thought to provide for the future is wise. The savings bank is one of the noblest institutions of modern times.

FOODS AND FOOD ADULTERANTS" is the title of a nine-volumed bulletin published by the division of chemistry of the agricultural department, Washington D. C. Six parts have been published, and three are in course of preparation. The bulletin contains the results of the investigations made under the direction of Chief Chemist Wiley, in dairy products, spices and condiments, fermented beverages, lard and its adulterations, baking-powders, sugar, confections, sirups, honeys and their adulterations, teas, coffees and chocolates, canned and preserved fruits, and flour and breadstuffs.

In these investigations the search-light of science is thrown on the adulteration of foods and the enormity of the evil is revealed. Did the public realize its magnitude the demand for the passage and enforcement of the most stringent laws against it would be too loud to go unheeded. Consumers should not and need not wait for legislation. Let them exercise good judgment in buying, demand articles of absolute purity and be willing to pay a fair price for them. When an article is offered at less than the market price it is time to suspect something wrong. Let consumers refuse to take adulterated goods at any price. If they all do their part they can help destroy the fraud. The enforcement of wise laws will do the rest.

The special report of the department

on the extent and character of food adulteration says that adulteration exists to a most alarming extent and that its character is generally fraudulent rather than dangerous. It is safe to say that at least 15 per cent of the entire food product is adulterated in one form or another, the overwhelming proportion of which is sold under fraudulent brands. At this rate the annual loss on food to consumers in this country would reach \$700,000,000.

In Ohio, Dairy and Food Commissioner McNeal has adopted a vigorous, aggressive policy, and the state statutes against food adulteration will be enforced to the letter. Prof. H. A. Weber, of the Ohio State University, will be chief chemist, with several assistants. The state is to be divided into districts. Prosecutions against violators of the law will be instituted without waiting for complaints from consumers. That is right. Wipe out the contemptible fraud.

THIS is a billion-dollar country. In the year ending with March our exports exceeded one billion dollars. And the imports were only one hundred and sixty-five millions behind, making a foreign commerce unprecedented in the history of the country.

It is a billion-dollar country in many other ways. There is a national public debt of a billion and a half. The state, county, municipal and school district indebtedness aggregates over a billion. The amount of money in circulation is a billion and a half. Deposits in savings banks amount to more than a billion and a half. There is a billion and three quarters on deposit in the national banks. Over two billions are loaned by national banks. Nearly a billion is loaned by savings banks. The annual gross earnings of the railroads of the country has reached a billion. The home value of the annual production of cereals is nearly a billion and a half. The horses of the country are worth a billion. The cattle and sheep are worth a billion. The total value of farm animals is nearly two and a half billions. In short, it is an all-round billion-dollar country.

FOUR centuries ago, before the Spaniards took possession of the land, there was a marvelous civilization in South America. For twenty-four hundred miles along the Pacific coast stretched the empire of the Incas. Between the sandy seashore and the summits of the Andes is found every variety of temperature, from tropical heat to that of perpetual snow. The mountain slopes of this rainless country the ancient Peruvians had turned into terraced gardens. Gigantic canals and aqueducts led the water from mountain ravines to upland pastures, terraced gardens and desert coast.

Their skill in agriculture was wonderful. The Peruvian husbandmen produced a great variety of the best crops ever grown, from the delicate cocoa and the finest tropical fruits to the mealiest potatoes and whitest maize, from long-stapled cotton to the silkiest alpaca wool.

Radiating from Cuzco, the metropolis of the Incas, was a system of roads pronounced by Humboldt to be the most stupendous and the most useful ever constructed by man. From the northern to the southern boundary of the empire were two main roads, one on the plateau, the other along the shore. The roads were

leveled and graded and were paved with smooth stones covered with bitumen. The shore road was built on an embankment and lined with shade trees. Post-houses were stationed every five miles for the relays of couriers. Messages delivered by one swift runner at the end of his beat to another, and so on, were carried at the rate of two hundred miles a day. The road on the plateau was a triumph of engineering skill. For two thousand miles it ran over elevated plains, descended slopes, scaled precipices, clung to high cliffs, tunneled through solid rock, crossed snow-covered sierras, spanned ravines with solid masonry or suspension bridges made of osier cables, ferried rivers, and surmounted every obstacle found in the broken range of the Andes. All this and much more was accomplished without iron and blasting powder, without labor-saving machinery, and for the use of foot passengers. These achievements of the skill and industry of the Peruvian Indian command the deepest admiration of the Anglo-Saxon-American. *The gospel of good roads is an old one on the American continent.*

VERY encouraging progress has been made in the past few years in the manufacture of binder twine from American hemp. A few months ago the two leading agricultural organizations of Illinois, the F. M. B. A. and the Grange, officially endorsed the American hemp twine made by a large factory in that state. They endorsed it because it is a home product of superior quality, sold at a fair price and manufactured by a company not connected with any trust or combine.

In 1890 this company used the product of 1,100 acres; in 1891, the product of 3,300 acres; in 1892 they will have the product of 7,000 acres. The hemp is largely grown by farmers near the factory, and they have found it a profitable crop. The factory has machinery for manufacturing the product of 10,000 acres. By another year it will probably be fully supplied by Illinois hemp.

We refer to this factory because it illustrates how American agriculture and manufacturing can aid each other and harmoniously develop together. The history of this factory can be repeated a thousand times, and millions of dollars now sent to foreign countries for fibers can be kept at home to the benefit of American agriculture.

BRADSTREET'S has practically taken a census of the existing business conditions throughout the cotton country, as bearing on planters, storekeepers and manufacturers. From the mass of data received from nearly twenty-four hundred correspondents in ten states it concludes that the acreage of cotton for 1892 will be decreased one fifth. Three fourths of these correspondents report that a larger acreage will be devoted to corn, oats, rice, tobacco, etc., and that hog and cattle raising will receive more attention than ever before. There has been much less depression in those districts not devoted exclusively to cotton, and the South generally realizes the importance of diversifying its productions. The remedy for the low price of cotton and the consequent depression of southern agriculture is at work. And the cotton crop of 1892 will be produced more cheaply than for many years past.

FARM AND FIRESIDE.

ISSUED 1st AND 15th OF EACH MONTH BY
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letters to the office nearest to you and address**FARM AND FIRESIDE**,
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We believe that all the advertisements in this paper
are from reliable firms or business men, and do not in-
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any but reliable parties; if subscribers find any of
them to be otherwise we should be glad to know it.
Always mention this paper when answering advertise-
ments, as advertisers often have different things ad-
vertised in several papers.

Our Farm.

PEANUT CULTIVATION.

CULTIVATION.

This PLANT demands the
most careful cultiva-
tion in the earlier
stages of its growth.
To produce paying crops this must not
be lost sight of. In ten or twelve days
after planting, work with plows and
hoes should begin and continue, at inter-
vals of two weeks, until the inter-
locking of the vines prevents further culti-
vation. The soil must be kept loose
about the plants and entirely free from
weeds. At the first plowing great care
should be taken not to cover the young
plants—throwing the dirt away from
them—but at each successive plowing the
earth should be thrown loosely around
them. Care must be observed not to run
the plow so close to the vines as to risk
cutting or disturbing them. Careless
plowing always results in partial loss of
crop. Hoes should follow and complete
the work that the plow has begun.

Mr. Walker has this to say in regard to
cultivation:

"By the time the peas are half way up
I run a side harrow as close to them as
possible. Eight or ten days after this I
harrow again, and then put in the hoes, to
get rid of the grass, loosen up the soil, and
throw dirt up to the peas when necessary.
After this I prefer to use a double shovel
every ten days or two weeks, until I have
gone through them five or six times. For
the first two or three of these plowings I
run my shovels deep; after that the depth
is immaterial; but each working should
be a little further from the plant than the
preceding one, in order to avoid disturb-
ing the runners. My peas are laid by
from the middle of July to the first of
August, and cultivation is finished by the
latter date. In working, after the peas
have begun to spread, it is hard to clean
them; therefore, they should be thor-
oughly cleaned of weeds before they be-
gin to spread. Careful culture pays better
with this than with most other crops;
indeed, the secret of success in peanut grow-
ing is good culture."

A farmer who cultivates thoroughly
will experience no difficulty in obtaining
a yield of from fifty to seventy-five
bushels per acre.

HARVESTING.

The crop is dug, or properly, plowed up,
between the 20th of September and the
15th of October. Necessarily, harvesting
should begin earlier north of the Ohio
river. This, however, is a matter of no
great concern, except that the vines make
splendid provender, especially for cattle,
when gathered before killing frost occurs.
The latter entirely destroys their valuefor forage. Thus, while you are "digging",
your peanut crop, you are making hay at
the rate of from one ton per acre on poor
soil to two tons on good. The value of
these vines can be reckoned at the market
price of the best hay.In plowing up your crop use a small
turn-plow, with a sharp, flat wing at-
tached, called, in the South, "the peanut
point." Run the plow along on both sides
of the row, close enough to sever the tap-
root and deep enough so that all the peas
will be brought to the surface. To avoid
the possibility of leaving any of the peas
buried, it would be advisable to have men
follow each plow with pitchforks, lifting
and shaking the vines, then replacing
them to become thoroughly dry before
shocking. Mr. Walker has the following
to say in regard to peanuts that may be
accidentally left in the soil:

"When the peas are all gathered, I turn
my hogs in on the field. This should al-
ways be done, as hogs will fatten nicely
on an old pea field, and there is no sense
in wasting the peas that have escaped the
gatherers. Indeed, I believe that if this
were the only use we could make of pea-
nuts, it would still pay to plant them,
and I know that, with the proper tillage,
etc., there is money in them even at fifty
cents per bushel."

If the weather is favorable, the vines
may be left four or five days in the field.
The nuts intended for seed should remain
in the open air, weather permitting, for a
week, thus giving them an opportunity
to become thoroughly dry.After four or five days the vines are
shocked around a pole, which should
stand from six to seven feet above ground,
turning the nuts in so that the vines will
afford protection against the inclement
weather—rain striking the pods is liable
to turn them dark, thereby unfavorably
affecting their sale. None of the pods,
when shocked, should touch the ground.
This may be accomplished by laying
pieces of timber—say three inches thick
—on either side of the stake. The shocks
should be topped off with anything that
will shed water.It is expedient to get the crop under
cover as soon as possible after it has be-
come sufficiently cured, thus avoiding
any ill effects of unfavorable climatic
conditions, and securing greater ease and
comfort in picking.The picking is done by hand, no ma-
chine as yet having been invented to suc-
cessfully do this work. Pickers receive
about twelve cents per bushel with board
and fourteen cents without. A rapid
picker can earn from eighty-four to
ninety-eight cents per day; an average
picker not more than sixty cents.The pods containing immature nuts are
called "saps;" the empty pods are called
"pops." The latter are worthless and
should be excluded. Some use may be
made of the "saps," but particular care
should be exercised to keep them sepa-
rate from the perfect peas, as the sale of
these mixed would bring the price far be-
low the mean average value per bushel,
than if each were sold separately.

MARKETING.

To realize maximum profits on your
labor, good judgment is required in mar-
keting. It is very important that the nuts
be carefully prepared for sale. "Pops"
should be discarded entirely; "saps" and
the discolored pods should be separated
from the others. Failure to do this will
cut into the profits to a surprising extent.Dealers insist upon having clean, bright
pods, and if they are not in that condi-
tion, they deduct the cost of cleaning from
the market price, and, consequently, the
producer loses the profit realized by the
peanut mills for the performance of this
labor. The importance of marketing
clean pods is better appreciated when it is
known that they command five to six
cents more per bushel.Mr. B. W. Jones furnishes the following
description of a machine for cleaning
peanuts, invented by the planters in his
state:

"A cylinder as large as a flour-barrel is
formed by nailing narrow slats of plank
to two circular pieces of timber. The slats
are put a little way apart, but not far
enough for the pods to slip through when
the cylinder is turned. A piece of tim-
ber runs lengthwise through the center of
the cylinder, the ends of this project about
a foot, and serve as an axle on which to

turn it. A crank is attached to one or
both ends of the axle. Two pieces of
scantling are fastened together in the
shape of an X, one for each end, and these
are held upright by having pieces nailed
on horizontally from one to the other.
Several slats on the cylinder are fastened
together to form a door, and this is at-
tached to the cylinder by hinges and
fastened with a button.

"The peanuts are poured into the cylin-
der—two or three bushels at a time—and
it is made to revolve slowly until the
earth and all the litter have fallen out."

The nuts are now ready to be bagged,
and care should be taken not to crush
them, as disfigured pods do not meet with
ready sale.The prices are subject to the same in-
fluences as are the prices of other commodi-
ties. First-class nuts seldom bring less
than seventy-five cents or more than \$1.50
per bushel. The total cost of production
per bushel is about forty cents. It is thus
seen that profits range from 100 to 400 per
cent. In view of the possibilities of so
great a profit, experiments in their pro-
duction on a larger scale are warrantable.

VARIETIES.

The names of the more important vari-
eties are the "White," "Red," "Guber,"
"Bunch" and "Spanish."The "White" is grown largely, if not ex-
clusively, in Virginia, and is the most im-
portant of the commercial varieties,
—bringing the top prices in the markets.
The vines spread out on the ground and
are from two and one half to four feet in
diameter, bearing from 100 to 160 pods to
a vine, containing two or three kernels
each.The "Red" is the leading variety grown
in Tennessee. It resembles, in growth of
vine, the "White," but differs from the
latter in that the nut is of a reddish-
brown color instead of pure white, and
in flavor is not so bland and sweet. The
pods of the "Red," or Tennessee variety,
are larger than the "White"—containing,
as a rule, four kernels.The "Guber" is grown in various sec-
tions throughout the South, but princi-
pally in Georgia and North Carolina. It
does not enter into commercial channels
to any extent, as it is usually grown for
home consumption only. The pod is
very small—usually containing but one
kernel. This variety outweighs the
others by five or six pounds to the bushel,
the kernel being very compact.The "Bunch" and "Spanish" varieties
differ from the others in that the vines
grow upright. The former is cultivated
to a limited extent and is called "Bunch"
from the fact that the pods grow in clus-
ters. The latter is a most deliciously
flavored nut. It is grown in various lo-
calities. Each vine bears from 50 to
120 pods.
E. M. THOMAN.

[To be continued.]

HOW TO CURRY A HORSE.

There are several reasons why a horse
should be regularly and thoroughly cur-
ried. No self-respecting man neglects
the bath. If he does—if circumstances
compel him to forego such luxury—he be-
comes a different man in every respect,
mentally as well as physically, and if
such neglect be long continued, as in the
case of men deprived of liberty, the lack
of cleanliness helps to break the spirit and
to rob of vitality, energy and self-respect.The effect is similar upon a horse. The
chief object of the curry is purely sani-
tary, to keep him clean. If this be done
thoroughly, other objects are attained.
Health is aided, the spirit and the fire
of the horse is maintained, and the ap-
pearance of the horse is as good as it can
be. All these come from systematic cur-
rying, provided the horse is properly fed
and housed.There is another object in currying,
quite as important to the enthusiastic
horseman. Of course, the man who can
afford it will employ a stable boy to do
the currying, but if the man wishes to get
the most out of his horse, if he wishes to
win the horse's confidence, affection and
willing obedience, he will curry the horse
himself, if not regularly, then often
enough to keep up the acquaintance and
friendship that may exist between a man
and his horse; so often that the horse
will learn the difference between his mas-
ter's hand and that of the stable boy, who
may be rough and "unconscious," sooften that the horse will look for his
master's coming, and by unmistakable
signs show his pleasure and affection.All domestic animals, from the canary-
bird to the ox, delight in having the head
rubbed. The horse is no exception. He
will rest his head on the edge of the
manger, and half close the eyes in
dreamy forgetfulness when the brush in
gentle hands is applied.Many horses are injured by the rough
curry, by the man who hurriedly drives
the metal comb harshly over the bony
parts, against the ears and over the eyes.
A horse subject to such treatment—and
there are tens of thousands of them—
dreads the hand of man—any man—and
dodges and learns to hold the head high
when the bridle is to be put on.Let the man who wishes to be on
friendly terms with his horse go over
the head with a stiff yet pliable brush,
rubbing back and forth on every part,
parting the roseat on the forehead, brush-
ing vigorously between the jaw bones, a
place the horse cannot reach, and doing
all so quietly and gently that the horse
stands motionless, apparently oblivious
to all surroundings.And over the body of the horse use the
metal currycomb carefully, if at all, and
use it, or better, the stiff broom brush, not
only to straighten the hair and remove
stains, but also get below the surface, to
reach the skin, that every particle of dust
and dandruff be brushed out. Then
what have we? A horse with a glossy
coat that glistens like satin in the sun-
light—a horse that feels as a man feels
who has been to the barber's and has
bathed, been shaved and shampooed.
The glossy coat depends upon the food,
but if it be right and the currying be
thorough, the horse may be not only the
pride, but also the affectionate, appreci-
ative companion of the owner.

GEO. APPLETON.

MISCELLANEOUS SUGGESTIONS.

BY JOSEPH.

A BIRD IN HAND.—Peoples' love of
"taking chances" of speculation crops
out in various ways. The instance of
the Pennsylvania subscriber (see "Cur-
rent Comment" of April 1st), who wants
coal to advance twenty-five to fifty cents
a ton, "so that he would probably be
benefited \$1,000 a year by the general
prosperity around him," is not more
curious than many others. There seems
to be a general belief that higher prices
for products must be of necessity fol-
lowed by higher wages and general pros-
perity. True, higher wages would result
in greater prosperity; for indeed, a na-
tion's prosperity can always be measured
by the reasonable distribution of wealth
among the great mass of the people, not
by the accumulation of wealth in the
hands of a few individuals. Higher
prices for certain articles are pretty sure
to add to the wealth of those who are en-
gaged in the manufacture and sale of
these goods; but the higher wages of the
workmen, the clerks, etc., do not seem to
pan out. At least, this is the experience
of the past, and we should not expect that
it will be different in future. The more
people have, the more greedy they get.

Manufacturers, coal kings, etc., do not
consider what wages they can afford to
pay to their employees, but only how
they can have the work done at smallest
possible cost. This is business. The man
who makes a million a year is just the fel-
low to look out for every penny, and if he
can increase his income to two millions
by "close economy" (paying the smallest
wages that his help will accept, or can
be made to accept) he will not hesi-
tate to do it. To look for gener-
osity and sentimental liberality in this
class of men, as an average, is like look-
ing for figs on a thorn bush, or strawber-
ries on a frozen river. The price the poor
man has to pay for his coal is an outrage.
Much smaller figures than are now the
rule would allow the coal monopolies
and the railroads a nice income, even after
paying to the miners, etc., every cent they
now receive. I am not anxious to see
twenty-five or fifty cents per ton added
to the price. The bird in hand is worth
more to me than a whole flock in the
bush.

The concentration of immense wealth
in the hands of a few individuals, I be-
lieve, is at present one of the greatest
dangers that threatens our free institu-

tions. The possession of immense wealth makes tyrants worse than princes and kings, and excessive poverty makes slaves.

ONLY A RENTER.—I wish to express to my many friends from whom I received letters of sympathy and advice, my heartfelt thanks. One of my friends advises me to put up a windmill over the well, and keep it pumping. The water will then be as good as a living spring. I believe this is a good idea. A great many wells are little more than stagnant pools. The water rushes in fast, and is taken out too slow to give the well much of the character of a spring. Pumping it out would bring in a fresh and wholesome supply all the time. Still I am "but a renter," and prospective changes in my vicinity, owing to the Niagara Falls tunnel scheme, do not allow me to think of remaining here for any length of time. I cannot afford to put up such an expensive thing as a windmill just for a year or so. If I were located here to stay on my own premises, I think I would act on my friend's suggestion.

Another friend asks me why I am a renter, and do not make an effort to settle on a place of my own. Let me quote, in reply, a passage from my "New Onion Culture," as follows: "I must confess that I do miss the privileges of an own permanent home. I would rather live in a hut, surrounded by a few acres of land, all my own, and be able to say 'fy sins, fy reste (here I am, and here I stay)' than to live in a rented palace. No matter how poor and defective the land, by a little effort here and there, and by little additions now and then, I would bring this land up to the highest state of fertility and cultivation in a few years, and otherwise transform the humble home into an earthly paradise, and all this without much actual expense or conscious effort. This would surely be more gratifying than to operate on rented land, to make improvements from year to year, and after a short period of my occupancy turn the whole over to somebody else, and let others enjoy the benefits from my labors and painstaking. Few of my readers, I hope, are thus unfortunately situated. But if you are, do as I do—make the best of it."

My friend may be sure that just as soon as I can locate in a place where it is likely I shall remain (which will probably be soon) I shall establish a home of my own. I have had this in view for years, but the peculiarities of my position have heretofore prevented the execution of my plans. On the other hand I have done fairly well as "only a renter." I have not hesitated to spend a few cents or dollars for a necessary improvement, or for manures, etc., for fear that somebody else as well as myself should reap some of the benefit. In short, I have tried to make the best of circumstances as I found them.

PASTURING VS. SOILING.

There are some who advocate soiling as being more economical than pasturing, and they give as reasons that less ground is required, all the manure is saved, the cows can be kept in a stable free from flies and they will give more milk, because they have less work to do in feeding and are not worried by the hot sun, the rain or the flies. On the other hand the objections to soiling are that the labor of cutting and hauling heavy green feed to the cows is great, it is difficult—in our uncertain climate—to have soiling crops come in in regular succession, and to provide such crops in sufficient quantity. The manure may all be saved but it will take time and labor—in the busiest season—to save it, and to provide stables that will be cool and free from flies is not within the reach of many. In cases where land is high in price and so situated—near a good market—that very profitable sale crops may be grown, and a sufficient number of cows are kept to warrant the employment of one or more men whose principal duty it shall be to care for the cows, then soiling may pay better than pasturing.

If continued experience should prove that cows may be fed on ensilage summer after summer, and retain their health and keep up their milk yield, breeding regularly meanwhile, then the silo will solve the problem for many who are now looking for something to take the place of expensive pasturing and are afraid to risk the more expensive soiling. But for the

great majority of dairymen the pasture will continue to be used for the summer feeding of the cows, and the pasture-field should receive more attention than is usually bestowed upon it.

PASTURES AND PASTURE GRASSES.

I don't think that, in this country, a permanent pasture can be had except in certain favored localities. There are natural pasture lands where the grass never runs out, and in such places fields may be set apart and used for pasturing indefinitely. But most of us cannot depend upon the nutritious grasses retaining the mastery in the fight against those plants we call "weeds," and so we must adapt our system of farming to bring the pastures into the crop rotation; either this or to seed down a field for pasture and then plow and reseed when it fails to be profitable for that purpose.

The number of grasses that we can depend upon for pasture are few, but two or three of them are very good; namely, Kentucky blue-grass, red-top and orchard-grass. These three may be sown and timothy and red clover at the same time, the two latter disappearing in a few years. The ground should be heavily seeded, so as to give a good stand at once, and if it be seeded early in the fall it can be pastured the next spring, but if seeded in the spring it could not be used for heavy stock until late in the season. When pastures are made from meadows the kinds of seed we can sow will be reduced in number, because the kinds named do not ripen together; and while that is all right for a pasture it is all wrong for a meadow. But in seeding down for a meadow to be used eventually for a pasture, we can add Kentucky blue-grass and red-top to the generally sown timothy and red clover; these two grasses will not make much show in the meadow for two years, and so will not interfere with the quality of the hay if it is to be sold, and after the meadow has been cut the second year it should then be pastured, and will answer for that purpose for a longer or shorter time, according to the fertility of the soil and the climate in which it is located.

There is this to be said in favor of keeping a field long in pasture, that the fencing bills are reduced as compared with those farms where the pasture-field is changed every few years, but a good wire fence can be taken down and be put up again without much cost of time and labor. In favor of the meadow system of supplying pasture, it may be said that fewer acres will be required than where a permanent pasture is had, for the grass will grow ranker and make much more feed to the acre; grass in old pastures is much finer and shorter than that in new meadows, the soil becoming more compact and the grass not so thrifty. It is claimed that this fine grass is more nutritious than that of ranker growth in the meadow, but I have never noticed that the cows did any better, if so well, on old seeded fields as on new.

A. L. CROSBY.

IMPORTANT PATENT LAW AMENDMENT.

EDITOR FARM AND FIRESIDE:—During the past fifteen years, since the troubles growing out of the "Drive Well" patent, many efforts have been made to so amend the patent law as to protect innocent purchasers of a patented article for their own use, from suits or threats of suit for such use of a patented article; but the bills were so drawn as to practically destroy the entire patent system, which has done so much for the country, and especially for the farmers of the great West; and hence, although there has been over one hundred (100) such bills introduced, none has ever been passed by congress.

At the patent centennial held at Washington last year an association was formed, composed of persons in all branches, farmers and others, which appointed a committee on legislation. This committee, recognizing the fact that abuses do exist under the law, by sharpers or speculators going about demanding pay for what they assert is an infringement of some patent, and threatening suit in case they are not paid, and by such threats, often without any good ground for such claim, collecting of farmers and others from \$10 to \$25, have submitted to the committee on patents of the house an amendment which will stop all such abuses.

It simply provides that hereafter when a patent is alleged to be infringed, the patentee or his representative shall seek his remedy in the first instance by suit against the manufacturer or vender of the articles alleged to infringe, and shall not sue the individual user who may have purchased such article of a regular dealer in the open market for his own use, until he shall have first enforced his remedy against the manufacturer or dealer, provided the purchaser shall inform the patentee or his representative, at the latter's request, from whom he purchased the article.

This exemption from suit, however, is not to apply to any corporation, firm or company; because if it did, a railroad company, for instance, could arrange with some irresponsible party to make the articles for it, and then the company could use them with impunity. So, too, it does not apply to any corporation or party who shall use a patented machine or process, for the manufacture of articles or products for sale. The reason for this is that there are many branches in which a few companies with a comparatively small number of machines, can do the business for the whole country, and it obviously would not be right to let them use without liability.

The object, as you will see, is to protect from suit or blackmail, the honest farmer or citizen, who simply buys for his own use an article or machine, and who has no intention of infringing a patent or any one's rights. Such a law will put an end to all the trouble and annoyance of which farmers and other individuals have complained, and it cannot possibly harm any patentee or the patent system, for it leaves the remedy against the manufacturer and the agent who sells the same as it now is under the law.

I think every honest man will approve of this change; and as the farmers are specially interested, I suggest that every farmer who reads this should sit right down and write to his member, asking him to do all in his power to secure the passage of house bill 601 as amended by the committee on legislation. It would also be well to write to Hon G. D. Tillman, chairman of the committee on patents, house of representatives, urging speedy action.

W. C. DODGE.

Chairman Committee on Legislation.

CULTIVATION OF BASKET WILLOW.

The general idea prevails that the osier, or basket willow, grows only on moist ground. This is entirely false. The cultivated willows can be planted on high ground, and only differ from those planted on deeper ground, in hardness of the wood. Both are equally pliable.

Although the cultivation of willows for the manufacture of baskets has not made the proper headway in this country on account of competition with the cheaper and much inferior wood splint baskets, yet the excellent qualities of the fine osier willow, its toughness, pliability and ivory whiteness, will continue to make it the most desirable material for the manufacture of strong and light basket work.

There is always a market for peeled willows which will bring from five to twelve cents a pound. Every farmer, whether he raises willows in a business way or not, should plant willows along his brooks and in spare places where nothing else is planted. If cut every spring and properly cared for, they will bring steady returns. Besides the good quality of the willow roots which hold banks of brooks and steep hillsides, large willow hedges are a good shelter, and there is no wood which grows so fast.

For the cultivation of willows in large quantities, observe the following: The land to be used for the planting of willows must be entirely free of weeds and stagnant pools of water. The cuttings are planted in rows, each stick being separated from the next by a distance of one foot. A space of three feet must exist between the rows, thus enabling the cultivator to pass and keep down the weeds and grass.

The cuttings sprout best on land which has been gotten ready the fall before, and they should be put in the ground right after the frost has left, so that the full moisture of the ground will help the plant to grow.

The cuttings which are chopped from two or three years' growth, long sticks of

cultivated willow (not wild willow), must be planted in ground up to the first or second bud, as otherwise the exposed part of the cutting may be spoiled by the heat or frost.

In the first year small switches will grow, which must be cut the following spring, about in March, or before the sap enters the plants. Each successive year will bring a decided increase in the crop, until the climax is reached in the sixth year; but with proper care the yield will last for many years more.

Willow switches must always be cut as close as possible to the stem to prevent the stumps from splitting up by heat or frost and decaying, which injures the stalks.

After cutting, the willow switches are bundled and put into shallow ditches of water close together so that they are emersed about three inches. If very dry weather, light sprinkling is necessary. In a short time the sap will go up between the stick and the bark, little buds will appear, and then it is time to peel them.

With the aid of a wooden fork with long prongs and a moderately sharp edge, through which the switches are drawn, the bark is easily loosened and can be taken off. If laid in the sun these willows will become beautifully white.

Spring-peeled willows bring a better price than the steam-peeled. Willows can be cut in the fall, steamed or soaked in hot water, and the bark can be easily removed in that way also, but the willow which has its tanning matter cooked out will soon turn red, and therefore is less valuable in the market.

Willows are tied up in bundles of twenty-five to thirty pounds, and stored in dry places. Twenty thousand pounds of green willows will yield about 1,000 pounds of good, dry, white willows. Thirty thousand cuttings are needed for an acre. These are worth about \$1.75 to \$2.25 per thousand. An acre will produce from three to five tons of willow pretty regularly.

There are many kinds of willows, but for the manufacture of baskets the so-called Welsh osier (*Salix viminalis*) is the best, and the use of the same has become universal.

F. MENECKE.

Wisconsin.



Mrs. William Lohr

Dyspepsia

"C. I. Hood & Co., Lowell, Mass.

"A year ago this last fall I commenced to fail rapidly, lost all appetite and ambition, and barely dragged along with my work. During the winter and spring had to have help about my housework. Physicians did not help me and I got more and more discouraged. I suffered from dyspepsia so that I

Could Not Eat Vegetables

or meat, and at last so that I could not even use butter on my toast. Used to dip the toast in tea and even then it would distress my stomach. In the spring I hired a girl permanently, my health was so poor. She tried to persuade me to take Hood's Sarsaparilla, as a lady for whom she had worked had been greatly benefited by it. She said: 'It will only cost a dollar to try it.'

I Dragged Along

Until August, when I began to take Hood's Sarsaparilla. In about a week I felt a little better. Could keep more food on my stomach and grew stronger. I took three bottles, am now perfectly well, have gained 22 pounds, am in excellent health. I owe all this to

Hood's Sarsaparilla

and am glad to let you know what it has done for me." MRS. WILLIAM LOHR, 101 Van Buren Street, Freeport, Ill.

Hood's Pills are the best after-dinner Pills, assist digestion, cure headache.

Our Farm.

A PLEA FOR BETTER ROADS.

BY W. M. K.

The INCREASED attention which is now being given to the question of the improvement of our public roads is, or should be, a matter of congratulation. We have been too long sadly lacking in earnest, co-operative effort in building good, permanent roadways, or in keeping such as we have in a passable condition during the entire year. There is no good reason why a concerted move should not be made toward permanent road improvement. The time has come when a disposition is being manifested for a decided reform in this matter.

The patchwork system is a wasteful one. Let the road districts unite in a proposition to begin at a certain point and make thoroughly good roads for a certain distance each year, and much good will result from it, as each section would prove a desirable object lesson, and be an inducement for other neighborhoods to make similar improvements.

At one of the most important road meetings ever held in the state of Pennsylvania, at which nearly sixty-seven counties were represented, the following principles, as a basis of action, were unanimously agreed upon as the best ones for general adoption:

First, the repeal of the privilege of working out the road tax.

Second, requiring the supervisors to employ the necessary labor where they can get the best workmen for the money expended, giving the preference to resident laborers.

Third, requiring other property of equal value with real estate to pay its proportion of expenses.

It was also ascertained by extensive correspondence that all road taxes should be made payable in money. The only objection made to this was by the county commissioners, who probably desired to retain control of the patronage necessary to keep themselves in office. As the school laws in nearly all states have proved satisfactory, it is safe to infer that if the road laws were formulated upon as nearly a similar plan as possible, they would be as successful in their results.

One trouble with the road question is the lack of a uniform system of road making and repairs, in which the funds raised are systematically used under the direction of a competent supervisor, who possesses "gumption" and sometimes technical knowledge of at least the cardinal principles of road construction and repair. What would be the condition of our public schools if each committee-man in each district should insist that his own ideas should be adopted as the rule of action regarding examination of teachers and distribution of funds?

In road making, as in farming, it is better to do whatever is done in the best possible manner. It is better to improve the worst places in the road thoroughly than to make or repair the entire roadway in the district or township in a half-way manner, which is the worst possible kind of economy. Since the improved road-making machinery has been introduced, there is no excuse for half-way work. An improved road-scraper, with six horses and a force of eight men, is guaranteed to do as much work in one day as eighty men can do, with picks and shovels, in the same length of time. Corroborating this statement, Col. Frank Mantor, of Crawford county, Pennsylvania, says: "Where the roadway is free from rocks, I can take a road-machine, two men and four horses, and do more work in a day than can be done by thirty men in the old way."

In road repairing, a little timely attention when slight repairs are needed would be the best possible economy. Each township, where the material for macadamized roads is convenient, should own a portable stone-crusher and an improved road-scraper, so that the roadbed need never be allowed to wear into ruts and holes.

Where gravel is to be had, an inexpensive free turnpike can be quickly and economically made. There is in the vicinity of Ottawa, La Salle county, Illinois, a two-mile section of road that will serve, in

Farm and Fireside Directory

OF

FARM IMPLEMENTS, MACHINERY, ETC.

This Directory will be found very useful to those who want any kind of farm implements, machinery or vehicles, and our readers will find it to their interest to write to the firms named for catalogues and information before deciding what to buy.

Always mention the Directory when writing to those whose names appear in it, for Farm and Fireside subscribers will secure special attention from them.

We aim to give in this Directory the addresses of reliable manufacturers and dealers in articles that are wanted by farmers and country people. All of these firms are well known to us, and we do business with many of them. So great is our confidence in them that we guarantee to return to our subscribers any money that may be lost by trusting any one whose name appears in this Directory, who turns out to be a deliberate swindler. This offer is to actual subscribers only, and is a positive guarantee to make good any loss occasioned by swindlers.

ARTESIAN DRILLING AND PUMPING MACHINERY.

The American Well Works, Aurora, Illinois.

BARB WIRE.

Kelly Barb Wire Co., Chicago, Ill.
Buck Thorn Fence Co., Trenton, N. J.

BINDERS, REAPERS AND MOWERS.

William Deering & Co., Chicago, Ill.
Johnston Harvester Co., Batavia, N. Y.

BUGGIES AND CARRIAGES.

Studebaker Bros. Mfg. Co., South Bend, Ind.
Bradley & Co., Syracuse, N. Y.

CORN PLANTERS.

Keystone Mfg. Co., Sterling, Ill.

COTTON GINS.

Kingsland & Douglas Mfg. Co., St. Louis, Missouri.
Daniel Pratt Gin Co., Prattville, Ala.
New Orleans Machinery Co., Ltd., New Orleans, La.

CULTIVATORS.

P. P. Mast & Co., Springfield, Ohio.
The Long & Allstatter Co., Hamilton, Ohio.

ENGINES.

Armstrong Bros., Springfield, Ohio.
Wood, Taber & Morse, Eaton, N. Y.

EVAPORATORS.

Blymeyer Iron Works Co., Cincinnati, Ohio.

EVAPORATORS FOR MAPLE AND SORGHUM.

The G. H. Grimm Mfg. Co., Rutland, Vt. & Hudson, O.

FARM WAGONS.

South Bend Wagon Co., South Bend, Indiana.

FEED CUTTERS.

Whitman Agricultural Co., St. Louis, Mo.

FENCE MACHINES.

Richmond Check Rower Co., Richmond, Ind.
Lansing Wheelbarrow Co., Lansing, Mich.

FERTILIZERS.

Baugh & Sons Co., Philadelphia, Pa.

FERTILIZER DISTRIBUTORS.

Kemp & Burpee, Syracuse, N. Y.

GARDEN IMPLEMENTS.

S. L. Allen & Co., Philadelphia, Pa.

GRAIN DRILLS, Etc.

Bickford & Huffman, Macedon, N. Y.

HARNESS.

Elkhart Carriage and Harness Co., Elkhart, Ind.
Sherwood Harness Co., Syracuse, N. Y.

many localities, as an excellent model for a comparatively cheap road. It is a prairie roadway. The width is twenty-seven feet from ditch to ditch. The ditches are twenty inches deeper than the surface line, and the form of the road is that of a crowning earth embankment. In all flat parts of the road a drain of four-inch round tile, with collars, is laid, two feet deep, lengthwise along the center of the road, discharging into the side ditches at convenient places. Upon the bed thus prepared a covering of gravel one foot thick and nine feet wide is placed, and left slightly crowning upon the surface. Earth from the side ditches is now drawn up to the edge of the gravel to prevent the latter from spreading. This makes a single-track, gravel road, with a dirt road on either side of it.

The road laws in many of the states are radically defective. We need, first of all, good laws. To get them, we must be present in force at the nominating conventions, and see that wide-awake, practical farmers are elected to our state legislatures—farmers who realize their personal responsibility to the community they represent, and will pledge themselves to adopt a good system for the construction and care of the public roads, which constitute such an important source of wealth to the public at large.

The road question should always be as non-partisan as that of the public schools. It is a question which should be agitated and pushed to the front until such laws are enacted and executed as will result in the best roads that it is possible to make with the most suitable material at hand. Let us cease to look only at the apparent great political evils in the distance, and take a good, square view of the present

HARROWS.

Gale Manufacturing Co., Albion, Mich.
Hench & Drongold, York, Pa.
D. S. Morgan & Co., Brockport, N. Y.

HAY LOADERS.

The Farmers Friend Mfg. Co., Dayton, Ohio.

HAY RAKES.

Stoddard Manufacturing Co., Dayton, Ohio.

HAY TOOLS AND MACHINERY.

Oborn Bros., Marion, Ohio.

HORSE POWERS.

C. Aultman & Co., Canton, Ohio.
S. S. Messenger, Tatamy, Pa.

IRON FENCING.

Hartman Manufacturing Co., Beaver Falls, Pa.

LAWN MOWERS.

Chadborn & Caldwell Mfg. Co., Newburgh, N. Y.

CREAMERY, BUTTER, CHEESE, DAIRY MACHINERY, SEPARATORS, Etc.

Flint Cabinet Creamery Co., Flint, Mich.
D. H. Burrell & Co., Little Falls, N. Y.
Davis & Rankin Bld'g and Manuf'g Co., Chicago, Ill.
Vermont Farm Machine Co., Bellows Falls, Vt.
Moseley & Stoddard Mfg. Co., Rutland, Vt.

PLOWS.

Oliver Chilled Plow Works, South Bend, Indiana.
Rock Island Plow Co., Rock Island, Ill.

POTATO DIGGERS.

Pruyn Potato Digger Co., Hoosick Falls, N. Y.

POTATO PLANTERS.

Aspinwall Manufacturing Co., Three Rivers, Mich.

ROAD MACHINES.

American Road Machine Co., Kennett Square, Pa.

ROOFING.

Kanneberg Roofing Co., Canton, Ohio.

SCALES.

Osgood & Thompson, Binghamton, N. Y.

SPRAYING MACHINES.

P. C. Lewis, Catskill, N. Y.

THRESHING MACHINERY.

The Huber Manufacturing Co., Marion, Ohio.
The O. S. Kelly Co., Springfield, Ohio.
Minard Harder, Cobleskill, New York.
The Westinghouse Co., Schenectady, N. Y.

WELL DRILLING AND PUMPING MACHINERY AND TOOLS.

Novelty Iron Works, Dubuque, Iowa.
St. Louis Well Machine & Tool Co., St. Louis, Mo.
Williams Bros., Ithaca, N. Y.

WINDMILLS.

The Springfield Machine Co., Springfield, Ohio.
Perkins Wind Mill Co., Mishawaka, Indiana.
U. S. Wind Engine and Pump Co., Batavia, Ill.
Aermotor Co., Chicago, Ill.
Stover Manufacturing Co., Freeport, Ill.

WIRE FENCE.

Sedgwick Bros. Co., Richmond, Ind.

WOOD FORCE PUMPS.

C. G. Blatchly, Philadelphia, Pa.

and 20 cents a bushel. This is a good county for raising hogs and cattle. Hay is worth \$1.75 to \$2.00 a ton. J. K. Edgerton, S. D.

FROM OKLAHOMA.—Three years ago there was no sign of a town where Guthrie now stands. April 22d, three years ago, when the territory was opened for settlement, before night there were not less than 14,000 people on the town site. At this date they claim 9,000 population. The city covers not less than 1,400 acres of land, and is provided with electric lights, eight or ten churches, ample school accommodations, quite a number of good two and three story brick blocks and a large number of fine residences. The carpenter's hammer, with its ceaseless noise, tells the visitor that the city has not reached its full growth. The various mercantile lines are well represented. Many of the stores would do credit to an old town. There is one line of business equally as well or better represented than any other, which looks very strange to those who have been living in Kansas for the last ten years; namely, the dram-shop, advertised with letters much larger than any other business in the city. B. N. Guthrie, Oklahoma.

FROM MAINE.—We had a very pleasant winter, with only about two months sleighing. Agriculture is the principal occupation here. We raise corn, oats, potatoes, beans and large quantities of winter apples, which find a ready market, either local or to ship to England. Last year's crop brought about \$1.25 per barrel. Potatoes are worth thirty-five cents per bushel; oats, forty-five; beans, \$1.50 to \$2. Madison, Somerset county, is a thriving town on the line of the Somerset railroad, largely engaged in manufacturing. It has two large woolen mills. It also contains the enormous plant of the Manufacturing Investment Company (of which ex-Secretary Whitney is president), for the manufacture of wood pulp by the sulphite process. This company has already expended from \$1,000,000 to \$2,000,000, and the plant is not near completed. The capacity is eighty tons per day. Business is good here, and the pay for skilled mechanics is from \$2.50 to \$5.00 per day; for common laborers, \$1.50. A. H. W. Madison, Maine.

FROM CALIFORNIA.—It is for the benefit of the laboring class and the boys that might leave their homes in the East to come to California, that this article is written. A laborer or farm-hand in California has to furnish his own bedding and sleep in a barn or outhouse, both winter and summer. It is a very rare thing for a hired man to sleep in a dwelling. It is true that labor commands better wages here than in the East. Wages here range from \$20 to \$30 per month; but the difficulty is that it is impossible to secure steady employment. Everyone seeking employment is looked upon as a tramp. There is no society for the laboring man in California. When he finishes a job, or after the rainy season sets in, he goes to the nearest hotel and stays until the rain is over, or until he obtains other employment, spending his earnings for board at the rate of \$1 per day. If a farmer wants help, he goes to the hotels in the nearest town or city, and hires them. Haying pays \$1.25 per day, and lasts about twenty days; harvesting pays \$2 per day, and lasts from thirty to sixty days; grape picking lasts about thirty days, at \$1 per day. Then there is no more work until the following spring, when he can probably obtain work for thirty or forty days. So the reader can readily understand why it is that during the remainder of the year there are hundreds of tramps within the state begging bread, and a large number of men seeking employment, with "not where to lay their heads." It is because of this state of affairs that this is written. It is not pleasant to write of the disadvantages of any country, but I would much rather write of the advantages; but I believe that some person should inform the people of the true state of affairs. Woodland, Cal. H. M. H.

FROM TENNESSEE.—Sherwood, generally known as the Sherwood colony, or northern colony, was established ten years ago by the Tennessee Immigration and Land Co. The village was named after ex-Governor Sherwood, of Minnesota, who is at present a resident of the place. Sherwood is situated in the fertile Crow Creek valley, about one thousand feet above sea-level, surrounded by the noted Cumberland plateau; this rises an additional thousand feet. The village is on the main line of the Nashville, Chattanooga and St. Louis railroad, 96 miles south-east of Nashville and 55 miles west from Chattanooga. Of the many prominent features which commend this colony to health seekers, business men and capitalists, a few may be named. It is a noted health resort, being as healthful as any place in America. The reasons for this are its high altitude, good natural drainage and equable climate. The writer has never known the thermometer to rise above 97° in summer, nor go below 13° above zero in winter. It has clean and pure waters, both freestone and mineral, and it is free from local causes for malarial diseases. It has excellent commercial advantages. Twenty trains pass through our station daily, six of which are passenger trains. It has superior manufacturing facilities. Coal and iron ore are both here in close proximity to each other, and there are vast areas of fine timber lands. Here is found almost every variety of wood, hard and soft, suitable for making spokes, hubs and felloes for wagons, furniture of all kinds, agricultural implements, staves, handles for implements, etc. Good brick and potter's clay, also limestone of choice quality for lime and building, are here found in great abundance. Our county has good soil and climate for cereals, fruits and grasses. This is the home for the peach, plum, quince, apple and small fruits of all kinds. A better natural range for stock cannot be found in the United States than exists here in the Cumberland table-lands. For recreation and pleasure there are many interesting points of natural scenery—cliffs, caves, amphitheaters, gorges and cascades, bold and prominent points of the mountains. We have good school and church privileges. Sherwood, Tenn. M. A. C.

CORRESPONDENCE.

FROM NEBRASKA.—Crops were good in this county last year. The yield was about as follows: Wheat, 15 to 45 bushels per acre; oats, 25 to 75; rye, 20 to 50; corn, 25 to 75. A great deal of grain has been marketed, but the farmers are holding some for better prices. Farm products are cheap; wheat, 53 cents a bushel; oats, 20; rye, 40; corn, 20; potatoes, 35 and 40. Good land can be bought here for from \$5 to \$25 per acre. M. F. L. Osburn, Neb.

FROM SOUTH DAKOTA.—Charles Mix county is well known for its good crops of wheat, rye, corn, flax and hay. Last year there was a general crop failure. Our average yields were about as follows: Corn, 45 to 55 bushels an acre; wheat, 20 to 30; oats, 50 to 60; barley, 35 to 45; potatoes, 100 to 200; flax, 20 to 30. Land can be bought at from \$5 to \$10 an acre. We have good water, good schools and churches. Corn is worth 18

Our Farm.

GARDEN NOTES.

BY JOSEPH.

FRUITS FOR FARMERS.—A reader of FARM AND FIRESIDE takes me to task for my statement, in April 1st edition, that it is not necessary to grow the newer and fancy kinds of currants, like the Fay, and that the older kinds are good enough. "Nothing, in my opinion," he says, "is too good for the farmers to grow and enjoy. He of all men is entitled to and in the position to enjoy the very best and choicest productions of the soil, and he should be encouraged and instructed to obtain and grow the choicest vegetables, grains and fruits, rather than be advised to be content with the old and inferior kinds. The sentiments as expressed by Joseph that the old things that were good enough for 'pap' are good enough for me, and should be good enough for you, has driven thousands of enterprising, progressive young men from the old home and farm to the city, or westward. Then the father wonders why it is that John is not willing to remain on the farm and enjoy the comforts of a good home. But John knows that it means stagnation and the dwarfing of his higher and better nature."

I endorse every word of this. My friend and critic has simply misunderstood me. I have often expressed similar ideas. The farmer deserves the best, and he should try to get and enjoy it. All my teachings have been in this line. The only point where my friend and I differ is in regard to what the best really is. Fay's currant is good. The berries are large and handsome; but on the whole I think the old white and red Grape and the old white and red Dutch are just as good, and in many respects better. These older sorts are usually more prolific, more reliable and certainly sweeter and of better quality. The farmer will not gain much by discarding the older sorts and planting the Fay. The Crandall, as stated, he does not want at all. White Imperial, however, is highly spoken of, and considered the "best" by good authorities. Still I can only repeat that it is not necessary for any one who has any of the others to plant the Fay, etc. A boy who can have plenty of the old-fashioned kind of currants will not leave the farm because he cannot have the Fay.

There are many of the new things that the farmer can easily get along without, and without fear of giving offense or annoyance to his boys. If he does not plant the "Japanese wineberry," for instance, or "Child's ever-bearing tree blackberry," or any of the high-priced novelties, for which the introducers, by word and picture, make such awful claims, he and his family will lose nothing except dear-bought experience, and probably save disappointment. But by all means have plenty of good fruit. If your place is not provided with a good portion of fruit-trees and small fruit-bushes of all sorts, do not neglect to plant this spring. Do it at once, or at least just as soon as you can get good plants and trees, and the ground in proper order. Select good, well-tested kinds, such as you know will thrive in your locality—yes, the best of them—and plant a great sufficiency, so you and your family will be bountifully provided, even when there is only a partial crop. Fruits have a great charm for the young, and will serve to attach them to the old home. But, after all, it is not necessary to have every new thing offered under the claim that it is "better than anything of the kind ever before known."

APPLE AND PEACH TREE BORER.—J. B., of Hempstead, N. Y., writes that he has succeeded in keeping off the borers from his trees by scattering a big handful of salt close to each tree every spring and fall. "I have never found a grub near the line of salt. Have used this remedy with success on all my fruit-trees, quinces included."

This is easily tried; and if my friends will keep strict watch of their trees for a month or two from now on, and cut out and kill every grub that might have got into the tree, either near the ground or in the crotch above, the remedy will be an infallible one. Painting with white-wash containing a little carbolic acid will also be found a good preventive of borer attacks.

LATE FROSTS.—In this section we usually have a late frost or two at the end of May. At that time of course we have some tomato-plants, etc., out in open ground. If they stand in a well-protected situation, they may escape injury, but there is always some risk. If it is merely a light frost, not a freeze, we can do much to repair the damage by sprinkling or spraying the plants with cold water early in the morning. If you have a knapsack sprayer this can be done quite quickly and conveniently. If not, use an ordinary garden sprinkler. I think it is much better and safer, however, to cover up the plants at night when frost is threatening. The weather reports in the daily papers usually give timely warning. Tomato-plants are easily managed. Either simply put a handful of hay on top of each plant, or bend them over to the ground, and cover up with a hoe of soil. Uncover again in the morning. Potato, bean and similar plants may be treated in the same way.

CABBAGES AND CAULIFLOWERS.—Now, try my way of growing these crops. Prepare the soil well, especially by the application of plenty of manure or fertilizers, and mark out light furrows the proper distance apart, say from two to three feet, according to variety to be planted. Then take a cup or basin containing the seed in the left hand, begin at one end of the row, take a pinch of seed between the thumb and forefinger of the right hand, drop it into the furrow where a plant is wanted, and cover by a slight brushing over with the foot. Then step on it, and proceed to the next hill, to be treated in the same manner. When the plants appear, dust them with sifted wood ashes, bone or tobacco dust, to keep off the flea-beetles, and later on thin the plants to one in the hill. Hoe and cultivate freely, and you will be pretty sure of getting good cabbages or cauliflowers. Give the Savoy a trial. The large American Drumhead Savoy is good enough for anybody. The Sureheads, Premium Flat Dutch, etc., are good and reliable ordinary sorts.

THE SEEDMAN'S CATALOGUE.

The florist's and seedman's catalogues have begun their travel into every part of the country. They are welcome everywhere. The farmer, especially, delights to peruse "in a quiet hour" by the fire. He reads again and again, and jots down what he'll "try this season."

Indeed, every member of the family finds something in the catalogue to instruct and to interest; even the youngest, for many days, finds balm for woes of life in looking at the illustrations, the beautifully colored plates showing the wonderful productions of the beneficent earth under the fostering care of the farmer and the gardener.

While doubts may rise as to the realization of all that is suggested by the engravings, yet we know that all is possible under conditions favorable. The study of the catalogue fires anew the heart of the agriculturist, wherever he may be—in the factory or in the counting-room—the man who has had a taste of agriculture in the days of his youth, and who yearns for it again.

The catalogues do help agriculture and men to it; they lead men to do what is of the greatest advantage to them. It is to any man's advantage to lift his mind from present toil or business, even if the work be agreeable, and how much more the benefit if the work be disagreeable! And, again, it is to every man's advantage to be in the open air—to have the exercise that comes from stirring the earth and scratching its back. Now, the man cooped in the city, if he have a strip of earth, cannot resist the impulse to plant, perhaps "to see if the catalogue tells the truth," to see if he can raise flowers or vegetables like those shown in the engravings.

Possibly he fails, but he does not blame the publishers of the catalogue. The primary object was flowers or vegetables, but in the result it was secondary. The chief point is he has been drawn out of the ruts of the business; indeed, out of his customary self for a time, has had recreation in the open air and is better for it, mentally and physically. There are thousands of such cultivators in cities, led to the work by the seedman's and the florist's catalogue, that inspire the old love of "seeing things grow."

To the practical farmer the catalogue on which he can rely is a great help. It aids him to make his plans; it keeps him up with the progress in his specialties; he will not continue to raise eight-rowed corn if twelve-rowed is in the market; he will not give labor to pin-head peas if marrowfats as large as marbles can be had. The catalogue cheers him. He sees the crops already in his hands, for here they are before him in "pictures and in words."

Let the the catalogues continue their travels, and let them begin them early. They lead to help in the noblest work, and to the enjoyment of the best life.

GEORGE APPLETON.

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

OUR NATIVE TREE FRUITS.

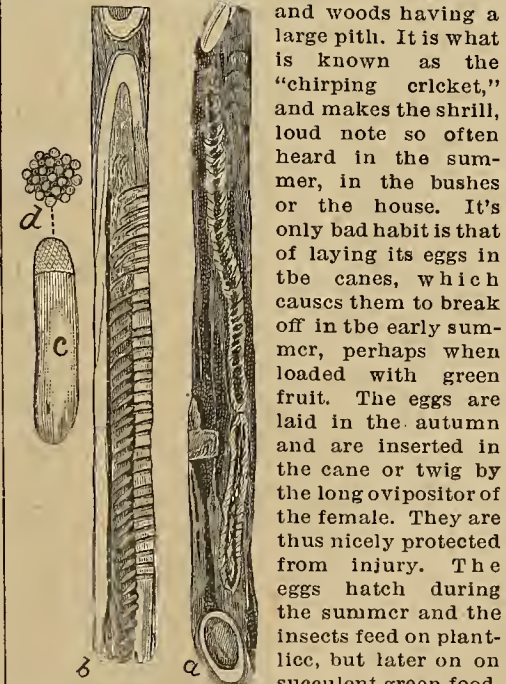
Take our cherries to begin with. We have, first, the shrubby choke cherry, which unquestionably might become the parent of an improved dwarf iron-clad fruit, either directly developed from the best among the wildings, or aided by crossings with foreign specimens. The dwarf Black Hills cherry, probably the largest of our natives, would, perhaps, cross well with the choke cherry. Among the innumerable wild "bird cherries," even in the wild state, selections could easily be made of trees producing very large and good fruit, with which to make an advantageous start, while the black cherry might be made the foundation for another race similar to the foreign heart cherries.

When you come to the plums, it is seen at once that nature has laid a broad foundation for us to build upon in our variant native species—east, west and south—selections from which are already widely cultivated. It is easy to believe that from these can be educed fruit far superior to and widely different from anything yet known. It would not be surprising to see plums from this stock reaching eventually the size and quality of the apricot, with a vigor of tree far beyond that of any foreign stone fruit. With this abundant material, and all the acquired skill of modern science, and with these natives and all their relatives from other continents to work with, our skilled horticulturists ought to produce remarkable results within a comparatively brief time. When we see how much was achieved by Rogers, in grapes, who can fail to have the courage to go on in what would seem an easy and honorable path of beneficent progress? Most of our station staffs have been chosen from amongst the young and ambitious students of natural science. This field of our native fruits should be a most inviting one to them, at least, who devote themselves to botany and horticulture.—*Vick's Magazine*.

INQUIRIES ANSWERED.

BY SAMUEL B. GREEN.

Snowy Tree-cricket.—L. S., Canton, Ohio. The twig you sent is infested with the eggs of the snowy tree-cricket. This insect infests also the canes of the raspberry, blackberry, plum and some other plants of the garden and woods having a large pith. It is what is known as the "chirping cricket," and makes the shrill, loud note so often heard in the summer, in the bushes or the house. It's only bad habit is that of laying its eggs in the canes, which causes them to break off in the early summer, perhaps when loaded with green fruit. The eggs are laid in the autumn and are inserted in the cane or twig by the long ovipositor of the female. They are thus nicely protected from injury. The eggs hatch during the summer and the insects feed on plant-lice, but later on on succulent green food.

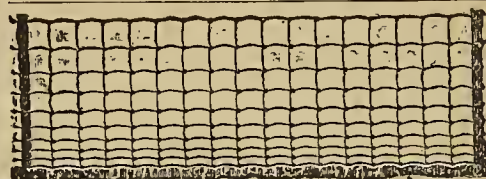


REMEDY.—The only remedy is to search for and burn the infested wood. If this method is rigidly followed in a neighborhood the insects are easily kept in check. The cuts show an infested cane, a cross section through it and an egg.

THE BOOMER AND BOSCHERT CIDER MACHINERY
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Our Fireside.

HOW GRANDPA PROPOSED.

"Tell you how grandpa proposed! Dear me!"
 And grandma nodded her silvery head
 Her hair was like gold in the days that were old,
 But the years had brought silver instead.)
 "How your grandpa proposed! Dear me!"
 Well, it happened the eve before Christmas, you see
 (How grandma's dark eyes shone!)
 And this tiny gold heart and this tiny gold key
 Your grandpa brought them and gave them to me.
 'I have brought you my heart. Will you keep it?'
 said he.
 'It will open to you, dear, alone.'
 And when in the heart I had fitted the key
 (What a flush on the dear old face!)
 I found that the space—just a large enough place—
 Held the tiniest picture of me!
 'Will you live in my heart forever?' said he.
 And that's how your grandpa proposed, dear, to me.
 And you think, 'as sweet as it ever could be?'
 Well—I thought so myself," said she.

—Philadelphia Call.

THE RUNAWAY.

WOULD they put her in the asylum," she wondered, "if they caught her?" Folks would surely think she was crazy. She stopped at the stone wall to rest and looked back timidously at the old familiar scene. Far behind her stretched the meadow, a symphony of olive and green in the late fall.

Here and there by a sunken boulder stood soldierly goldenrod, or herry hushes clothed now in scarlet and gold. At intervals in the long slope stood solitary trees, where fluttering, brittle leaves fell in the gentle chill air. In summer-time she remembered well the haymakers in the shade, and the jug with ginger-water she made for the men was kept there to be cool.

She seemed, as she sat there, to remember everything. The house was all right, she was sure of that; the key was under the kitchen door-mat, the fire was out in the stove and the cat locked in the barn.

She held her work-hardened palm to her side, panting a little, for it was a good bit of a walk across the meadow, and she was eighty years old on her last birthday. The cows feeding looked homelike and pleasant.

"Good-by, critters," she said, aloud; "many's the time I've druv' ye home an' milked ye, an' I allus let ye eat by the way, nor never hurried ye as the boys done."

With a farewell glance she went on again, smoothing as she walked the scattered locks of gray hair falling under the pumpkin-hood, and keeping her scant black gown out of reach of briars. Across another field, then on through a leafy lane where the wood was hauled in winter, then through a gap in a stump fence, with its great, branching arms like a petrified octopus, to the dusty high-road.

Not a soul in sight in the coming twilight. John, the children and the scolding wife who made her so unhappy, would not be home for an hour yet, for it was a long drive to East Mills.

Down the steep hill went the brave little figure, followed by an odd shadow of itself in the waning light, and by tiny stones that rolled so swiftly they passed her often, and made her look behind with a start to see if a pursuer was coming.

"They'd put me in an asylum, sure," she murmured wildly, as she trudged along.

At the foot of the hill she sat down upon an old log and waited for the train.

Across the road, guarded by a big sign, "Look out for the engine," ran two parallel iron rails, that were to be her road when the big monster should come panting around the curve.

At last the dull rumble sounded, a shrill whistle, and she hurried to the track, waving her shawl to signal.

This, in the conductor's vernacular, was a cross-roads station, where he was used to watch for people waving articles frantically. The train stopped, and this passenger was helped aboard. He noticed she was a bright-eyed old lady, very neat and precise.

"How fur?" he asked.

"Bostin'."

"Git there in the mornin'," he said, standing waiting for the money, as she opened a queer little reticule where, wrapped in a clean cotton handkerchief, under her knitting, was her purse with her savings of long years—the little sums Sam had sent when he first began to prosper in the West and some money she had earned herself by knitting and berry-picking.

At a cross-roads, as they went swiftly on, she saw the old sorrel horse, the rattling wagon and John with his family driving homeward. She drew back with a little cry, fearing he might see her and stop the train; but they went on so fast that could not be, and the old horse jogged into the woods, and John never thought his old Aunt Hannah, his charge for twenty long years, was running away.

At Boston a kindly conductor bought her a through ticket for Denver.

"It's a long journey for an old lady like you," he said.

"But I'm peart for my age," she said, anxiously; "I never hed a day's sickness since I was a gal."

"Going all the way alone?"

"With Providence," she answered brightly, alert and eager to help herself, but silent and thoughtful as the train took her into strange landscapes, where the miles went so swiftly it seemed like the past years of her life as she looked back on them.

"Thy works is marvelous," she murmured often, sitting with her hands folded, and few idle days had there been in her world, where she had sat and rested for so long.

In the day coach the people were kind and generous, sharing their baskets with her and seeing she changed cars right and her carpet-bag was safe. She was like any of the dear old grandmas in eastern homes, or, to grizzled men and weary women, like the memory of a dead mother as faint and far away as the scent of wild roses in a hillside country burying-ground. She tended babies for tired women and talked to the men of farming and crops, or told the children Bible stories; but never a word she said of herself, not one.

On again, guided by kindly hands through the great, bewildering city by the lake, and now through a yet stranger land. Tired and worn by night in the uncomfortable seats, her brave spirit began to fail a little. As the wide, level plains, lonely and drear, dawned on her sight, she sighed often.

"It's a drefful big world," she said to a gray-bearded old farmer near her; "so big I feel e'enmost lost in it; but," hopefully, "across them deserts like this long ago Providence sent a star to guide them wise men of the East, an' I hain't lost my faith."

But as the day wore on, and still the long, monotonous land showed no human habitation, no oasis of green, her eyes dimmed, something like a sob rose under the black kerchief on the bowed shoulders, and the spectacles were taken off with trembling hand and put away carefully in the worn tin case.

"Be ye goin' fur, mother?" said the old farmer.

He had brought her a cupful of coffee at the last station, and had pointed out on the way things he thought might interest her.

"To Denver."

"Wal, wal; you're from New England, I'll be bound?"

"From Maiae," she answered, and then she grew communicative, for she was always a chatty old lady, and she had possessed her soul in silence so long, and it was a relief to tell the story of her weary years of waiting to a kindly listener.

She told him all the relations she had were two grandnephews and their families. That twenty years ago Sam (for she had brought them both up when their parents died of consumption, that takes so many of our folks) went out West. He was always adventurous, and for ten years she did not hear from him; but John was different and steady, and when he came of age she had given him her farm, with the provision she should always have a home, otherwise he would have gone away too. Well, for five years they were happy, when John married, and his wife had grown to think her a burden as the years went on, and the children when they grew big did not care for her, and she felt she had lived too long.

"I growed so lonesome," she said, "it seems I couldn't take up heart to live day by day, an' yit I knowed our folks was long-lived. Ten years back, when Sam wrote me he was doin' fair, an' sent me money, I begun to think of him, for he was allus generous an' kind, an' the gratefulest hoy; an' so I began to save to go to him, fur I knowed I could work fur my board fur a good many years to come. Fur three years he ain't hardly wrote, but I laid that to the wild kentry he lived in. I said b'ars an' Injuns don't skeer me none, fur when I was a gal up in Aroostuk kentry there was plenty of both, an' as fur buffers, them horned cattle don't skeer me none, fur I've been used to a farm allus. But the lonesomeness of these medders has sorter upst me, an' made me think every day Sam was further off than I ever calc'lated on."

"But what will you do if Sam ain't in Denver?" asked the farmer.

"I hev put my faith in Providence," she answered simply, and the stranger could not mar that trust by any word of warning.

He gave her his address as he got off at the Nebraska line, and told her to send him word if she needed help. With a warm hand-clasp he parted from her to join the phantoms in her memory of "folks that had bin kind to her, God bless 'em," and the train went rumbling on its way.

But many of the passengers had listened to her story and were interested, and they came to sit with her.

One pale little lad in the seat in front turned around to look at her now and then and to answer her smile. He was going to the new country for health and wealth, poor lad, only to find eternal rest in the sunny land, but his last days brightened by the reward of his thoughtful act of kindness.

"She probably brought these boys up," he thought, "and denied her life for them. Is she to die unrevared, I wonder? There cannot be any good in the world if that be."

He thought of her and took out his poor purse; there was so little money in it too; every cent made a big hole in his store; but the consciousness of a good deed was worth something.

"I mayn't have the chance to do many more," thought the lad, buttoning his worn overcoat.

He slipped off without a word at a station and sent a telegram to Denver.

"To Samuel Blair"—for he had caught the name from her talk—"Your Aunt Hannah Blair, of Maine, is on the W. & W. train coming to you."

It was only a straw, but a kindly wind might blow it to the right one after all.

When he was sitting there after his message had gone on its way, she leaned over and handed him a peppermint drop from a package in her pocket.

"You don't look stroug, dearie," she said; "hain't ye no folks with ye?"

"None on earth."

"We're both lone ones," she smiled. "An' how sad it be there ain't no one to fuss over ye an' be keeful of the drafts, an' keep flannel allus on your chest; that is good for the lungs."

"You are very kind to take an interest in me," he smiled; "but I am afraid it is too late."

Another night of weary slumber in the uncomfortable, cramped seats, and then the plains began to be dotted with villages, and soon appeared the straggling outskirts of a city, the smoke of mills, the gleam of the Platte river, and a net-work of iron rails, bright and shining, as the train ran shrieking into the labyrinth of its destination.

"This is Denver, and I'll look out for you as well as I can," the lad said to her.

"I won't be no burden," she said, brightly. "I have twenty dollars yet, and that's a sight of money."

The train halted to let the eastward-bound express pass; there was an air of excitement in the car, passengers getting ready to depart, gathering up luggage and wraps, and some watching the newcomers and the rows of strange faces on the outward-bound train.

The door of the car slammed suddenly, and a big-bearded man, with eager blue eyes, came down the aisle, looking sharply from right to left. He had left Denver on the express to meet this train. His glance fell on the tiny black figure.

"Why, Aunt Hannah!" he cried, with a break in his voice.

She put out her trembling hands and fell into the big arms, tears streaming down the wrinkled face.

"I knowed Providence would let me find you, Sam," she said brokenly, and no one smiled when the big man sat down beside her and with a gentle hand wiped her tears away.

"Why, I've sent John twenty dollars a month for five years for you," he said angrily, as she told him why she ran away, "and he said you couldn't write, for you had a stroke and was helpless, and I have written to you often and sent you money. It's hard for a man to call his own brother a villain."

"We won't, Sam," she said gently. "We'll just forget it. And I won't be a burden to ye, fur I kin work yit, and fur years to come."

"Work, indeed! Don't I owe you everything? And my wife has longed for you to come. There are so few dear old aunts in this country, they're prized, I tell you. Why, it is as good as a royal coat-of-arms to have a dear, handsome old woman like you for a relation."

Then he found out who sent the telegram and paid the lad, who blushed like a girl and did not want to take it.

"I suppose you want a job," said the big man. "Well, I can give you one. I'm in the food commission business. Give you something light. Lots of your sort, poor lad, out here. All the reference I want is that little act of kindness to Aunt Hannah. Here's the depot, Aunt Hannah, and you won't see the bears and Injuns and buffaloes you were talking about, but the prettiest and sunniest city you ever set your dear eyes on."

He picked up the carpet-bag, faded and old-fashioned, not a bit ashamed of it, though it looked as if Noah might have carried it into the ark.

They said good-by, and the last seen of her was her happy old face beaming from a carriage window as she rolled away to what all knew would be a happy home for the rest of her life.

OUT OF THE MOUTHS OF BABES.

She was the dearest little girl, with such a host of "first things" happening all at once.

The greatest and best of all the "first things" was going into the country, for she was born in a flat, and during her four short years she had scarcely been out of it. She was such a sweet little girl that her papa and mamma pretended they must raise her just as near heaven as possible, so they took the top flat in a very high buildug, maybe that was the reason, and maybe it was because there was such a little roll of bills in papa's pocket-book on pay-day.

The flights of stairs were too long for her small strength, and she was too heavy to be carried, and so she had seen less of the world than most four-year-old babies.

But one blissful day they went to the country to live, and then she learned that the world was very large and beautiful. She was glad with all her heart that they had ceased to live in a flat, for, as she said plaintively:

"Flat people are drefful stupid and don't have a hit of a good time."

But more to her than singing birds and hursting bnds were the great fertile fields. She loved to watch the shining plow turn up the long, straight furrows of soft, black loam.

For the first time she saw how the seeds were planted—the fine seed scratched in, the larger seed buried deeper. With the greatest

interest she watched the first little sprouts that appeared; the first leaves; the first tassels on the corn; the first funny little teeth on the cob; the first blossoms on the apple-trees, the first promise of fruit.

But, dear me! you couldn't begin to count all the "first things" she saw during that first wonderful summer; and now she was going to her first funeral.

Mamma had explained as best she could that marvelous mystery men call death, and told her of the resurrection and the life beyond, and the little maid who lived so close to nature's heart listened and finally comprehended the story.

And so they went to the house where the dead man lay, and she was lifted up to see the quiet face; she saw the weeping family, the sorrowing friends, the gloom of the household.

"Why do they wear black dresses, mamma?"

"Because they are so sad, darling."

"Why don't some one tell them he will rise aden?"

"Hush, dearie, you must not talk now," said the mother gently.

When the service was over they went to the cemetery and stood beside the open grave.

"What a big hole," she thought, "but John used to say that a big seed had to have a big hole; men and women are like big seeds and have to be buried deep, and babies are like little seeds, and I spect they are just squatched in."

"Dust to dust, ashes to ashes," solemnly and impressively chanted the minister. The heartbreaking sobs of the widow, the piteous grief of the children, the sorrowful sighs of old-time friends—hopeless, unutterable sorrow on every face, in every heart, as the dirt rattled down on the coffin.

The child realized that the mourners were going away sadder than they came, and her tender heart was sorely troubled.

"Why didn't some one tell them about the resurrection?" She looked inquiringly at the minister, but his face wore the settled calm of one who has done his whole duty.

"The wesurwecksion—oh, if they only knew about the wesurwecksion, they would be just as happy now as they were last spring when the seed was all in the ground," she whispered to herself.

Clearly, some one had a duty to do, and in her overwhelming desire to comfort them she overcame her natural timidity and walked bravely forward to the very edge of the grave.

"Don't cry, don't feel bad," she pleaded, her sweet little face eloquent with pity. She hesitated a second, her vague knowledge of the future struggling with her limited experience of seed-time and harvest. Then her clear, childish voice rang out strong and hopefully, carrying conviction with every syllable.

"You just plant him, and he will come up all right in the spring."

"Aye, thank God," said the minister softly, as if he were pronouncing the benediction, "even though we lay our precious dead away this cold, bleak, wintry weather, in the glorious springtime of the resurrection he will rise again to a glorious immortality."

And so they went home comforted, for lo, a little child had spoken better than she knew. —Chicago Times.

THE FRUIT THEY EAT.

Frank R. Stockton's pet fruit is said to be the crab-apple. Howells exhibits a preference for the pumpkin, especially in the form of pies, and James loves, both house grapes. The flowery pomegranate is believed to be Amelie Rives' favorite, and the luscious watermelon the choice of Joel Chandler Harris. Eugene Field denoted his taste in his song of the "Little Peach," and James Whitcomb Riley dotes upon the persimmon just crisped and colored by the first frost of fall. Lafcadio Hearn loves the guava and Ella Wheeler Wilcox the banana, while Mrs. Cruger's voice is heard for the Bartlett pear and Minnie Irving's for the chestnut. "By their fruits ye shall know them."

THE FARMER'S SHOP.

You might as well try to live without a kitchen as without a shop, and could more than save the interest on the investment in one year, saying nothing about time lost in going to town to get a breakage mended, while teams and men were idle. If there had been a shop and a few tools, the same work could have been done by some one present. Build a shop according to your needs, and put the old cook-stove into it, and buy your wife a new one; it is far better than a heating-stove for oiling harness, melting glue, popping corn and making molasses candy.

FOR CATARRH

boils,
pimples, eczema, and
loss of appetite,
take that sure
specific,

Ayer's Sarsaparilla
Cures others, will cure you

A GRAND COLUMBUS FETE.

It is now a pretty well-assured fact that this country will have, next October, in commemoration of Columbus, a monster celebration, beside which even the Washington inaugural centennial of a few years ago will seem rather small. The programme covers three days and is most elaborate. It has been laid before the committee of ceremonies of the Columbian Exposition and before the board of control, and adopted by a unanimous voice.

The large and growing sentiment in the east is that the discovery of America by Columbus should be celebrated at New York by some grand ceremony and a magnificent pageant.

The programme as proposed in a general way is, that on Saturday, October 8, there shall be a grand spectacular pageant, or street parade, illustrating in all possible phases "modern progress." This parade will be civic, industrial and military.

The invitation to participate will be so general and sweeping as to include every organization of every kind.

The monster procession, it is planned, shall be reviewed at various points by the president of the United States, the governors of this and other states, the mayors of this and neighboring cities, and the leading dignitaries of the World's Columbian Exposition and the societies which participate in the pageant.

Sunday, October 9, will be a day of praise and rejoicing, and all the pastors of the city churches will be requested to prepare sermons fitting the occasion.

On Monday morning, October 10, will occur the pageant and procession of 14,000 of our Spanish and Spanish-American and Mexican fellow-citizens, dressed in the beautiful and characteristic Spanish costumes of the fifteenth century, under the direction of Imre Kiralfy, who has been employed by the Spanish societies to manage the display. This will be a most beautiful and gorgeous procession. It is to be reviewed by representatives of the courts of Spain and Italy and all the distinguished reviewers of the procession of October 8. This morning parade will be followed in the afternoon by the unveiling of the statue of Columbus in Central Park, presented to this city by the Italian residents. Here it is designed to have orations in Italian, Spanish and English, and it is expected that all the prominent people who will have gathered in the city will attend. Later in the afternoon there will be a grand choral festival and banquet.

On the evening of this day ten great excursion trains, running at ten minutes headway, will leave the Grand Central depot for Chicago, arriving there on the evening of October 11. These trains will be occupied by the governors of the eastern and middle states and their staffs, mayors of cities, eastern commissioners, officers and members of the Spanish and Italian societies, and such other people as can be accommodated. It is believed that at least five thousand people will avail themselves of this opportunity to visit the dedication of the fair buildings, and that the entire lot of trains will form a triumphal procession between the two greatest cities in the United States, and that hundreds of thousands of people will gather to see them pass. It is hoped that Chauncey M. Depew and Col. Ingersoll will go on this excursion and deliver orations at the dedication ceremonies.

Upon the arrival of the trains at Chicago the occupants will be met by the governor of Illinois and the mayor of Chicago, their staffs, the entire World's Columbian Exposition commission and thousands of soldiers, who will escort them to the fair grounds, where the dedication ceremonies will occur.

It is interesting to look back through the 400 years that have passed since the discovery of America and study the surprising progress that has been made in every branch of industry, science and art by the American people. And in this study we should not forget to whom the honor of first opening the American continent is due. We are indebted in equal measure to Queen Isabella and Christopher Columbus for that service. The scene in the Spanish court where they joined forces to undertake the first voyage of discovery is beautifully portrayed in the splendid picture, "Columbus at the Royal Court of Spain," which we offer on another page. The successful termination of the work of reproducing this famous painting stands to-day a monument to the wonderful achievements of the nineteenth century. They are veritable works of art, in which the artists have surpassed all previous efforts. This picture should hang upon the walls of every home in America.

TALK FROM A HORSE.

Don't ask me to back with blinds on. I am afraid to.

Don't lend me to some blockhead that has less sense than I have.

Don't think because I am a horse that iron-wrecks and briars don't hurt my hay.

Don't be so careless of my harness as to find a great sore on me before you attend to it.

Don't run me down a steep hill, for if anything should give way I might break your neck.

Don't whip me when I get frightened along the road, or I will expect it next time and maybe make trouble.

Don't think because I go free under the whip

I don't get tired. You would move up if under the whip.

Don't put on my blind bridle so that it irritates my eyes, or so leave my forelock that it will be in my eyes.

Don't hitch me to an iron post or railing when the mercury is below freezing. I need the skin on my tongue.

Don't keep my stable very dark, for when I go out into the light my eyes are injured, especially if snow be on the ground.

Don't leave me hitched in my stall at night with a big cob right where I must lie down. I am tired and can't select a smooth place.

Don't forget to file my teeth when they get jagged and I cannot chew my food. When I get lean, it is a sign my teeth want filing.

Don't make me drink ice-cold water, nor put a frosty bit in my mouth. Warm the bit by holding a half minute against my body.

Don't compel me to eat more salt than I want by mixing with my oats. I know better than any other animal how much I need.

Don't say whoa unless you mean it. Teach me to stop at the word. It may check me if the lines break, and save a runaway and smash-up.

Don't trot me up hill, for I have to carry you and the buggy and myself, too. Try it yourself some time. Run up hill with a big load.

THE MODERN GIRL.

This is the era of the heavy-weight, athletic young woman, who walks abroad with the swinging tread of a grenadier, shoulders erect, chest expanded and head held high, a young woman who can hold her own in a boxing-match, thinks nothing of a ten-mile walk, and is altogether a new type of American independence. She is the evolution of the modern college.

Professor Bragdon, of Lassell seminary, is authority for these facts: Since the opening of the seminary in September up to date, forty-two young women have gained nine pounds or over; three, fourteen each; two, sixteen each; one, nineteen; one, twenty; one, twenty-two, and the record-breaker has gained over twenty-three pounds in a little over four months. The feather-weight of them all weighs eighty-one pounds; the heaviest, plump, one hundred and sixty-seven, and they are the healthiest set of girls in all New England. So much for calisthenics, athletics, physiology and hygiene in the curriculum of higher education, for Lassell specializes health and avordupois even above Greek and Latin as important points in culture. It is to Lassell we must look to controvert all lingering prejudice of the debilitating effect of higher education.—*Boston Post.*

THREE GOOD BUSINESS RULES.

Never sign a paper without reading it, and if, after reading it, you do not understand it, have it thoroughly explained before you put your signature to it, says an exchange. It is best to get some third person who is not interested in the matter at all to explain the meaning of what is not clear, or to point out words that may have two meanings in the document.

Always make a memorandum in your little book of any contract you undertake for money, or any agreement to work. It saves much trouble to keep a memorandum-book, and put down the dates when you either pay or receive money. Whenever money passes on account, set it down. If any money or thing of value goes through your hands, give a receipt for it and make a memorandum. Your receipt settles the amount that passes, and that cannot be disputed. When you pass it to a third party, get a receipt and keep it. This form is as important in the transfer of income, trust money or valuables among your own family as with other persons.

Never allow any person to do any service for you without first agreeing upon the cost to you. This rule strictly adhered to will save you many annoyances.—*Dry Goods Chronicle.*

DON'TS FOR GRAMMARIANS.

Do not say "He speaks bad grammar," but "He uses poor English."

Not "I am real ill," but "I am really ill."

Not "I feel bad," but "I feel badly."

Not "Hadn't ought," but "Shouldn't have."

Do not begin all remarks with an exclamation such as "Well!" "Say!" "Oh!"

Do not say "I'm going, I don't believe," but "I'm not going, I don't believe."

Not a "free pass," but a "pass;" not "new beginners," but "beginners;" not "elevated up," but "elevated."

Not "I am through dinner," but "I have finished dinner."

Not "It is too salty," but "It is too salt."

Not "It is tasty," but "It is tasteful."

Not "light complected," but "light complexioned."

Not "He don't come to see me," but "He doesn't come to see me."

Not "Who are you going with?" but "Whom are you going with?"

Not "I incorrectly," but "I am incorrect."

Not "She wrote to Nell and I," but "She wrote to me."

City and Country.

HAVE YOU CATARRH.

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THEN USE

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Dr. Thompson's Eye-Water

Our Household.

SOME ONE LOVES US BEST.

BY MARY E. VANDYNE.

Said the roses to the pansies,
As they looked around the bowers:
"Who can doubt it, who deny it?
We excel all other flowers.
See our robes of many colors,
And our petals smooth and fair;
With a wealth of richest fragrance
Fill we all the summer air."

Not far off a tiny violet
Waited till she heard them through,
Then, with gentle voice she whispered:
"But the people love us, too.
Though we are not tall and stately,
Though our faces are not fair,
Search amid the richest garlands,
You will find the violets there."

Soon there came a gentle maiden.
As she looked the garden o'er,
"Ah!" she cried, "you lovely roses,
All the world must you adore.
But my place is very humble,
Like the violets that I see;
Ladies fair must wear the roses,
Violets, you were born for me."

With her little hand she gathers
Violets white and violets blue;
Close upon her heart she lays them,
Pure and fragrant, fresh with dew.
And the tiny violets trembling,
Nestling closer to her breast,
Cry: "We are not like the roses,
Yet, you see, she loves us best."

"Ah!" I thought, "the violets teach us
Lessons sweet and lessons true;
Though we are not like the roses,
Some one's sure to love us, too.
Though we are not fair and stately,
Nor in silk and jewels dressed;
If we are but kind and gentle,
Some one's sure to love us best."

—The Congregationalist.

HOME TOPICS.

POT-PIE.—This may be made of any kind of poultry or meat, either raw or that has been previously cooked.

If you have a pound or two of cold roast beef or mutton left from yesterday's dinner, cut it from the bones in rather thick, oblong pieces. Break the bones, cover them with water and let them simmer two or three hours for the gravy. An hour before dinner time, strain this gravy into the saucepan you wish to make the pot-pie in. Put in the meat and add water enough to cover it well. Season to taste with butter, pepper and salt; let it boil thirty minutes, then add a half dozen potatoes cut small, and stir a batter with a pint of flour, a heaping teaspoonful of baking-powder, and milk enough to make a very stiff batter. As soon as the water boils after the potatoes are put in, drop the batter in spoonfuls over them, cover the saucepan closely and let it boil steadily for twenty minutes, when it will be ready to serve and the crust be as light as a feather. There must not be water enough to boil over the dumplings, only enough to boil up over the potatoes before the dumplings are put in.

To serve, put the dumplings around the edge of a platter and the meat, potatoes and gravy in the center.

Cold roast turkey, chickens or veal may be used in the same way.

BANANA PIE.—Peel two bananas, press them through a colander and add one pint of milk and two tablespoonfuls of sugar. Stir these well together until perfectly smooth, then add a little salt, a teaspoonful of lemon extract and two well-beaten eggs. Bake in one crust in a moderate oven. This quantity will make one pie.

CARE OF THE HAIR.—The hair will gather dust and needs washing occasionally as much as the face and hands, though of course not as often. Hair keeps its color and gloss much better if, whenever it begins to seem dirty, it is given a good shampooing.

To a wash-bowl of warm water add a tablespoonful of borax and wash the scalp and hair thoroughly; rinse it well in clear, warm water and you will be surprised at the dirt that will come out. Wipe the hair well with dry towels and do not put it up until it is perfectly dry.

Brush the hair with long strokes for ten minutes every night and morning. Do not use a brush stiff enough to hurt the scalp, but one of medium stiffness, the bristles of which are long and close together.

Perseverance in this treatment will give the hair a beautiful, natural gloss, and by keeping it healthy will prevent it from falling out and also help to preserve its natural color much longer than if it was neglected.

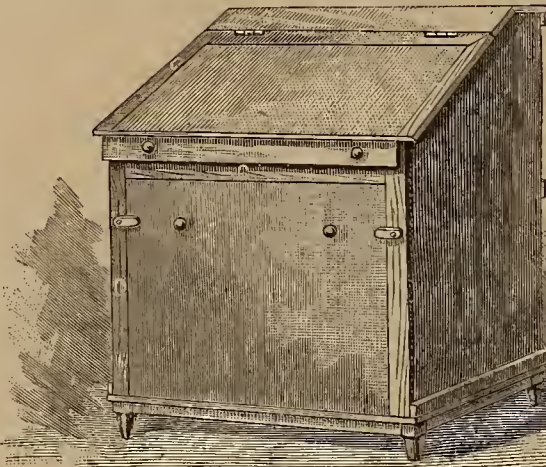
MAIDA McL.

FLOUR-CHEST.

In your issue of March 15, S. A. W., Ottawa, Kan., asks for a design for a convenient flour-chest. Enclosed I send you a draft of a flour-chest of my own make, which is said to be very convenient by those who are now using them. The draft shows the end and front of the chest, closed.

I will begin the description with the feet. I take four pieces, 8 inches long and 2½ inches square; turn a foot on one end, leaving 3 inches of the other end square to receive the casings. Two of the casings are 3 feet 4 inches long, and two 18 inches long, and framed into the feet the same as the frame of any fall-leaf table.

For the bottom of the chest I take good



FLOUR-CHEST.

lumber, and make a solid bottom 4 feet long and 21 inches wide, and fasten to the frame with screws, just the same as fastening on a table-top. On each end of the upper side of this bottom put strips 21 inches long, 2 inches wide and 1½ inches thick. Then on each side fit in strips 3 feet and 8 inches long, 1 inch wide and 1½ inches thick. These strips must be fastened on with screws.

The end boards are solid, 19 inches wide and 3 feet 10 inches long, to be cut the same shape as shown in the draft. The ends are then set on the inside of the strips on the bottom, and fastened on with screws from the inside, the screws to go into those 2-inch strips across the ends. By this plan you avoid joints on the inside. The next will be the top piece, which is 4 feet 4 inches long and 11½ inches wide, giving a projection of 2 inches at each end, and 1 inch in front after the casing goes on. Then put two strips across the back, reaching from one end piece to the other, one at the top and one in the center. These strips serve as ties, also to nail the back to, and should be 3 inches wide.

The back is of ½-inch lumber, set on the inside of those strips across the back and nailed from the inside. The lumber for the back to be cut same length as end pieces—3 feet 10 inches—and set up and down from top to bottom. Next are the front casings, 3 inches wide, and put on as shown in draft, marked C.

The kneading-board (H) works on the same principle as a drawer; it is 18½ inches wide and 3 feet 6 inches long, with a casing on front edge 2 inches wide and full length of chest, with two knobs as shown in draft. This board can be taken out when putting in flour, and drawn half way out to take flour from the chest.

The lid, as shown in draft, closes down over the kneading-board, which makes a handy and convenient box for bread, pies or cakes. The lid raises up and lays back against the top. Close the kneading-board in tight, and you have a better place for kneading bread or rolling out pie-crust than on a table. There should be inch strips on the kneading-board, in order to keep the crumbs that will accumulate from falling onto the floor.

The panel, as shown in the draft, is a very convenient arrangement for cleaning the chest. There are stops put on the inside of the casings, and the panel is carefully fitted in and pushed back tight

against the stops; it is secured on the outside by two wooden buttons and the strip on the bottom. The buttons should be put within three inches of the top edge of the panel, on a line with the two knobs. When you wish to clean out your flour-chest, take out this panel and you have no trouble.

A flour-chest of this size gives you room for five hundred pounds of flour. The best lumber to make them of is black walnut. I make all of mine from well-seasoned walnut, and find ready sale for all I can make, at \$7 apiece. Use inch lumber for all excepting back and feet.

JASPER OLNEY.

HOW TO PRODUCE RELIEF IN PAINTING.

A lady has written to ask how to produce relief, that is, *roundness*, in painting. She says: "I wish so much to be able to paint flowers. I have tried, but the flowers, stems and leaves look as flat as if pressed for an herbarium. I am perfectly disgusted. I painted some nasturtiums and the blossoms looked a little natural, but the leaves and stems were as flat as paper."

As this is a common difficulty, it is worth while for us to talk it over. Doubtless there are many others who would utter the same complaint. Let me tell you one thing, the fact that you see this fault of flatness is a great thing in your favor. Some persons have not this critical discernment. The truth is this, you ought not to try to paint roundness before you can express it with the simpler medium of crayon or lead-pencil. You should learn to draw. Now, in order to make

shape you require shading. Take a simple example. Draw a circle. It will not be an exact circle, apt to have bumps and humps, and in spite of the story, we doubt if Giotto's was absolutely faultless. When you have done it as well as you can, your drawing suggests nothing particular. That, by the way, reminds me of an anecdote. A little girl on returning from church was asked by her mother what the sermon was about. The preacher was the little girl's father, I may as well say. The answer was, "Oh, nothing particular." That is the truth about too many sermons, and too many other things in this world. They have no shading, no expression. You can take your outline of a circle, and make of it, by means of shading and varying the outline slightly, a croquet ball, an orange, an apple, or a lemon. Some of you say you cannot draw from nature, but allow me to contradict you; you can. Let a side light fall on the object you wish to draw and look at it with half-shut eyes. You will gradually learn to see the variations of light and shade, and the next step is to reproduce them. Use a No. 1 lead-pencil and white paper. Spoil a great deal of material in your efforts to learn and you will surely succeed.

Another important thing is to be able to make things look hollow. This is just reversing the effect of the ball. A deeply concave saucer is a good model. Always let the light fall from one side, and if in drawing it you remember to make the shadow which the object casts on the ground where it stands, you will find it helps quickly to produce the desired effect.

I often speak to my pupils about light and shade alternating in a picture, that the light generally comes next to the dark, producing contrasts. Imagine the light falling on this concave saucer. The side near to the light is shaded; the light cannot penetrate that side of the dish, but the side far from the light is illuminated, and just back of it will be the shadow cast by the saucer. If, while you read this, you experiment with the object described, you will understand it well.

If you wish to make a cylinder appear as it is, you must shade the outlines heavily, letting the shading fade away gradually toward the middle of the cylinder. This rule must be observed in painting or drawing stems. As they are very small cylinders, a good effect can be pro-

duced simply by making strong outlines, generally the under one darker.

In arranging flowers for drawing, always have the dark ones in the background, but if they are all the same color, to produce effect you must shade those in the background, and the same is true of leaves. It is a rule that, in a picture, what you wish to bring near the observer must be light. What you wish to seem to recede in the background must be dark.

KATE KAUFFMAN.

SUMMER TREATMENT OF CALLA-LILIES.

A great many articles have been written on this subject, and it seems as if I had tried every plant given in three years gone by, and finally buried the last of seven nice callas, all killed by excessive kindness, I expect. A year or two ago I started in anew, and made some experiments of my own.

Last June I put a calla bulb in a bed with canna and caladium around a fountain basin, and it received the same treatment as they; it grew slowly all summer. In September I took it up and repotted it in good, rich dirt. In a few weeks it began to bud, and has had flowers on all winter long. The last bloom was very large, measuring five and a half inches across the top.

It has done the best of any of my callas. This year all the calla bulbs will be planted in the open ground, where they can get the full force of the sun, and only sufficient water to keep them growing slowly. I have not kept the plant as wet as I used to do, and have had more blossoms and larger ones. Keep the leaves washed free from dust, and also to help destroy any stray louse that may endeavor to find a resting-place there.

GYPSY.

BABY'S EARS.

A pretty baby! Rosebud mouth, sunny eyes and softly curling hair—but ears! such ears! However, you can mold a baby's features at your will, say people who know. It would only be kindness to train outgrowing ears and persuade them to assume the normal attitude of these important features. In sleep, when the child turns from side to side, ears that are not naturally flat are bent forward and their peculiarity increased. To obviate this the doting mother who wishes a future reward of gratitude can make a cap of tape, which will hold back the ears and compel them to grow properly.

HOW THEY PLANTED THE BEANS.

When the head of the house was mapping out the day's work for the boys, before leaving the house for the day, garden making was one of them. The spring was late, and when the time finally came when the weather was considered warm enough to put the seeds in the ground, they were set at it and told to work away until they had the garden full except setting out cabbage, tomato and sweet potato plants, which came later.



BABY'S EARS.

Well, in the first place they had to prepare the beds for the onion sets and seeds, and a bed for lettuce and another for radishes, and a ridge for beets and another for parsnips and so on. Well, our garden is a very large one, and instead of putting the onions and radishes in the corner nearest the house, they put them in the farthest corner; and I told them I had about as soon go into the adjoining county as over there, especially when in a great hurry.

They told me I "should have told them

were I wanted them planted, whether in this county or another." They worked away with a will, and soon had all the packages of new seeds planted, and were rummaging around in an old cupboard for more and not paying much attention. I did not notice that they carried a large package of corn (or pole) beans out with the other things.

About half an hour before dinner came they came in, saying the garden raking was completed. The paterfamilias put in an appearance, too, about that time, and commenced questioning them as to what and where and how they had planted the seed necessary for a good garden. Everything was all right but the beans, and when he found out they had planted the corn beans in the garden, instead of waiting a little later and planting them with the corn (when the latter had enough start to keep the beans from pulling it up by the roots) he was somewhat wrathful. The boys insisted that poles would do as well as corn, and that they "just had to have something to fill up the garden anyhow." But no, nothing would do but what those beans had to be dug (first case on record) after dinner and put where they ought to be.

So after dinner was over they all started for the garden, and down they went on their knees and dug beans, and as they had raked the ground over smoothly again after planting them they had a regular "picnic." There was fully one quart of the beans, and, well, they managed to find the most of them as well as to leave the ground in as finely a pulverized condition as garden soil ever gets. When they brought them in, they remarked that "those were remarkable beans, planted, dug and the first beans of the season brought in, all inside of six hours." A little later they were planted in the corner of the corn-field, and did quite as well after the resurrection as before, and we had many a mess of beans throughout the summer, as well as plenty for the neighbors who were not so abundantly supplied.

A. M. M.

SOME FRIENDS OF OURS.

Some of the shyest, most modest little creations in the world are waiting now in the fence corners, along the creek and in the woods for their old friends to come and greet them. They are of such a friendly nature that they will gladly welcome all the strangers who seek their habitations.

To our readers who are uninitiated, we want to introduce one family in par-

pale blue. The petals, which together make a corolla, are in this flower ununited (usually six of them). They are surrounded by three little green leaves, which become very downy on the under side as the plant grows older.

The leaves will be ready about the first of May for examination, for by that time they will be well formed and some will have attained their full size. By a careful reading of the description and a glance at the accompanying design, one will easily recognize the Hepatica. From its three-lobed leaf, which by some is supposed to resemble the liver, it gets its English name, liverwort. The leaves, which are supported by stems so downy that they are fairly white, are thick, faintly spotted, not veined (hold them to the light and see how the veins cross and recross one another), downy, and grow in thick clumps about two inches high, lasting through the summer and autumn. The Hepatica once known will not be forgotten, and will really grow to be a favorite.

To this same family, Ranunculaceæ, belongs another, which, with its bright, bold, yellow blossoms, is quite unlike its modest little sister in blue.

What country child has not been attracted by the marsh marigold or cowslip, and braved the perils of swamp or marsh to be rewarded with a generous supply of the golden cups with their large, glossy leaves? Perhaps the same child has dug into the moist earth for peppery crowfoot roots, which, when secured, he held tight in his grimy little hands until a stream was reached wherein the yellow roots could be washed—and perchance the brook were dry, it mattered not, for they were relished just as much by the little rodent.

We cannot leave this family without mentioning the pretty little wind flower, Anemone, with its slender brown stem, clusters of fine leaves and delicate white blossoms, suggestive of a breath of spring.

MARY D. SIBLEY.

STRAWBERRIES.

The bowl of strawberries on the farmer's table is one of the most delightful suggestions of spring, and the taste of them makes it a delicious realization. "Strawberries," writes the poet, "deserve all the good things that may be said of them." They are beautiful to look at, delicious to eat, have a fine odor, and are among the most healthful fruit that we have.

It is said of an eminent French writer that he attributed his longevity to the free use of them, while good authority places them among the food remedies for fever, weak digestion and gout.

The usual mode of serving strawberries with cream and sugar is very palatable; but country housekeepers will find that a variety in preparing this delicious fruit will render it acceptable every day throughout the season. The following recipes will be found reliable:

STRAWBERRIES AND WHIPPED CREAM.—Place a layer of strawberries on the bottom of a glass dish, cover with pulverized sugar; then another layer of berries and sugar, cover the top with a pint of whipped cream, the whites of

three eggs and a teaspoonful of sugar. Set on ice one hour before serving.

STRAWBERRY SHORTCAKE.—Stem two quarts of ripe strawberries, sweeten and mash. Make a quart of flour into biscuit dough, roll out an inch and a half thick, put into a greased baking-pan, and bake very quickly. When done, take from the oven, split in halves and spread lightly with butter. Place the lower half on a dish, put half the berries on it, cover with the other half, spread with the remaining berries, pour cream around and serve.

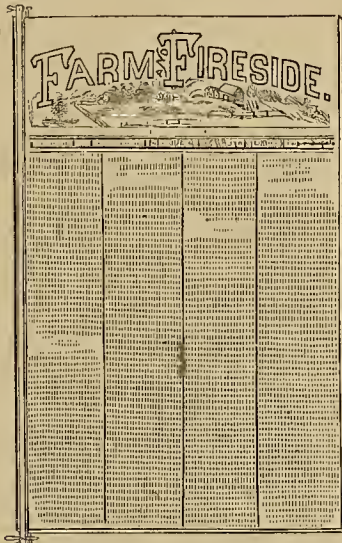
E. R. P.

Coffee spoons with flowers enameled in natural colors on the handles are among the novelties in silverware.

INEXPENSIVE FILE.

I have for many years been a reader of the FARM AND FIRESIDE. I am always pleased with its semi-monthly visits. I have made for it a very handy and inexpensive file. As any one who reads the paper should be able to make one himself (if he does, he will find it as convenient as I have done), I will send a description of it.

Take two strips of light wood one half inch wide, one quarter inch thick and seventeen and one half inches long. Through one of these drive four four-



penny wire nails, and through the other make four holes, through which the ends of these nails may pass.

Then to bind a paper, lay it on a board, and place the points of the nails about half an inch from the left edge of the paper. Strike each nail with a hammer, so as to drive it through the paper. Press the paper upon the nails, and then put on the other strip. Then bind the ends of the strips together with a cord or rubber band. To put on other papers, remove the loose strips and put on as at first.

J. R. S.

FUNERAL ETIQUETTE.

LOUISE LONG CHRISTIE.

It is very trying to persons having a funeral in the family for the first time to know how to conduct it in the proper way, unless the undertaker himself is an adept in such affairs. The grief sweeping over the family for the first time generally renders those nearest afflicted almost helpless.

It is a growing custom in some cities to have funerals private, and it is to be highly commended. After death an undertaker should be given the care of the body as soon as possible. As it is not customary to keep any one past three days, they ought, I think, be prepared to lie in the coffin at least two days before burial, so as to allow the near friends to have the satisfaction of seeing them unhurried.

There are diseases, of course, where this length of time would be impracticable. Here is a field for the introduction of

women. A woman connected with the establishment of your undertaker should be put in charge to receive callers, to do in fact the thousand and one little things that so often must be done. If you have friends to do them for you, you are fortunate; there are some who haven't.

Where flowers are received the cards should be removed and kept, so that those living may afterwards acknowledge the reception of them. There are letters to write to distant connections that the lady assistant of the undertaker should be able to attend to, little matters of toilet, perhaps children to be left at home while the dear one is taken away.

With different people customs differ. Just now the corpse is laid out under the parlor chandelier in full blaze of light, while the entire room is darkened. It is optional who sit here, but many prefer the room to be occupied by the sorrowing family, who do not come into the room until immediately before the beginning of the religious services; the guests having taken their farewell look as they pass into their seats further back in the house. If it is a family of good control they will have taken their own farewell earlier in the day, so that at the close of the services the coffin can be immediately closed, the guests dismissed—or vice versa—dismiss the guests and then allow the family a few moments in private.

Most funerals are now of private interments. The guests should abstain as far as possible from the appearance of any morbid curiosity, and should upon dismissal quietly disperse and not hang about the neighborhood, on the fence and strung along the walks.

Loud outbursts of grief should never be indulged in. Keep your grief too sacred for the observing eye of the public. At these times people are often drawn into great extravagances, both of dress and burial appointments. It is well to have some one whose mind is free from the sorrow to overlook these matters.

Mourning apparel can be rented in some places—this is better—then afterwards you can make your own selections.

Pure white for small children is a perfectly proper dress.

If one goes into mourning, it entails a great deal of expense and many little details that must be observed, so it is well to seek advice on the subject.

In our large cities there are stores wholly devoted to mourning goods of every description, which makes it much easier to select what is wanted for such a wardrobe.

Few people are aware that it takes a great deal of taste and management to dress properly in mourning. Only the ultra-fashionable use crape. For ordinary wear it is not used at all.

It seems as if this field of work might open another avenue for woman's work, and make it very desirable to all interested.

(Additional Household on page 10.)



LIVERWORT.

ticular; we select it because we think you have already half an acquaintance with it. This family is the Ranunculaceæ. The members of it are not nearly so forbidding as their names, which, if given in plain English, is the very commonplace one of—not crowfoot, but crowfoot. The children of this family are to be found from April to early autumn. One of the first to thrust its head from the brown mother earth is the little Hepatica, or liverwort. So glad it seems, to escape from its dark home into the bright sunlight, that it puts forth its blossoms before a leaf is shown. It is easily recognized by its downy stem and bright blue petals, which gradually fade into a very

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When anything stands a test of sixty years among a discriminating people like the Americans, it is pretty good evidence that there is merit somewhere. The value of a medicine is best proved by its continued use from year to year by the same persons and families, as well as by a steady, increasing sale. Few, if any, medicines have met with such continued success and popularity as has marked the introduction and progress of Brandreth's Pills, which, after a trial of sixty years, are conceded to be the safest and most effective purgative and blood purifier introduced to the public.

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Our Household.

A LEGEND.

There has come to my mind a legend, a thing I had half forgot,
And whether I read it or dreamed it, ah, well, it matters not.
It is said in heaven, at twilight, a great bell softly swings,
And mau may listen and hearken to the wonderful music that rings,
If he put from his heart's inner chamber all the passion, pain and strife,
Heartache and weary longing that throb in the pulses of life—
If he thrust from his soul all hatred, all thoughts of wicked things,
He can hear in the holy twilight how the bell of the angels rings.
And I think there lies in this legend, if we open our eyes to see,
Somewhat of an inner meaning, my friend, to you and to me.
Let us look in our hearts and question, Can pure thoughts enter in
To a soul if it be already the dwelling of thoughts of sin?
So then, let us ponder a little; let us look in our hearts and see
If the twilight bell of the angels could ring for us—you and me.

—Rose Osborne.

ANSWERS TO FLORAL QUERIES.

BY GEO. W. PARK.

Give botanical and English names of the plants I send you. No. 1 grows in abundance along roadsides and open woods, and blooms in June and July. The flowers, borne in heads, are pale blue. Specimen No. 2 was found July 15 in a shady woods. Stem, leaves and flower are nearly white. Each stem bears but one flower. This plant turns black in drying.

F. H. S.

Bucks county, Pa.

ANSWER:—Specimen No. 1 is *Brunella vulgaris*, commonly called self-heal. No. 2 is *Monotropa uniflora*, popularly known as Indian-pipe.

1. When do you prune oleanders? 2. How and when should I transplant roses? 3. What treatment should be given the date palm?

S. E. Roosk.

ANSWER:—1. Oleanders may be pruned either in the autumn, after they have bloomed, or early in spring before growth begins. 2. The best time to transplant roses is early in spring. If transplanted in autumn they are liable to be thrown out by frost. Pot-grown roses may be set out at any time during spring and early summer. 3. Give the date palm a well-drained, rather tenacious compost, and water freely during the summer months. In winter water more sparingly. Use an unglazed earthen pot, and occasionally turn the plant out and wash the inside of the pot. Shift the plant as it grows, as its growth is hindered by the roots being crowded.

My house plants are infested by a pest of small flies resembling gnats. They deposit eggs in the soil that hatch out small grubs, which attack the roots of the plants, destroying them. Can you give me a remedy? I have tried repotting, tobacco and soap-suds and coal-oil, without success, as both grubs and flies keep increasing.

JOSEPH KNORR.

Custer county, Neb.

ANSWER:—Allow the soil about your plants to dry well at the surface, then water thoroughly with lime-water. This is made by stirring fresh-slacked lime into the water to be used, and allowing it to settle, applying only the clear water. Two or three applications at intervals of a week or ten days will soon eradicate the pest. Tobacco-water will have the same effect if applied in the same way. The secret of success consists in allowing the soil to partially dry out before the liquid is applied.

1. What magnolias are hardy in the latitude of Springfield and Columbus, Ohio, Indianapolis, Ind., and Springfield, Ill.? These are all on about the same latitude. Who has tried *M. acuminata* and *M. triplala*, and with what success? 2. Give a list of ornamental trees usually catalogued by nurserymen, that are known to be hardy in the latitude of the places above named. Please include *Salisburia* and *Laburnum*, if hardy.

DR. A. C. WILLIAMS.

Douglas county, Ill.

ANSWER:—1. Both of the magnolias named are native trees, and found as far north as New York. *M. acuminata* grows abundantly in southern Pennsylvania,

where it is perfectly hardy. There is a fine specimen of this species in the grounds of the Michigan Agricultural College. If it endures the winters of Michigan unprotected it ought to prove hardy in the latitude referred to by the inquirer. The Chinese species, *M. Soulangeana*, is hardy in protected places in southern Pennsylvania, where it attains a large size, and blooms freely early in the spring. Where there is danger from cold it is always well to afford the trees protection by planting near a building. 2. *Salisburia adiantifolia* and *Cytisus laburnum* are both hardy as far north as Michigan. To these might be added many native and exotic ornamental trees, such as *Cornus*, or flowering dogwood, *Cercis*, or red-bud, *Cheerianthus*, or fringe-tree, cut-leaved weeping birch, horse-chestnut, purple-leaved beech, weeping willow, lime-tree and many others which are hardy and beautiful.

PROTECTING ROSES.—Last June I received a box of roses. Each rose had its roots in a little moss-covered clump or lump. I did not unravel them or touch the roots. I planted them in a cozy little square, a foot apart in the row, rows eighteen inches apart. They all bloomed. Some of them different times before cold weather set in. As winter approached I built a board shed around them, leaving the end to the east open, covered with board roofing early in fall, before the ground got wet, and on the approach of cold weather I banked around inside horse stable manure, also spread a few inches of the manure amongst them. Then I covered all over with chaff and cut corn fodder, which remained dry all winter. Now I want to plant them in the garden, if I have any to plant. I am sure of one, as the tiny little leaves are as green now as at any time last summer. I removed the roofing over a week ago, but did not disturb the mulch or covering as yet, and am glad I didn't, as this morning it was four degrees below freezing point. Please tell me where I did right and where wrong, and how I am to act now in transplanting, and if the roots of roses and other flowering plants should be spread out after receiving them.

ALEXANDER SULLIVAN.

ANSWER:—It is better to let roses remain unprotected till winter sets in. The early frosts of winter do not harm the plants, and cold, unprotected ground will retard the flow of sap and harden the plants. It is well, however, to allow the protection to remain on till the Easter flowers are in bloom, as the freezing and thawing of early spring may injure the plants after the covering has been removed. When plants are received from the florists all moss and wrappings should be removed, and the earth about the roots loosened, then bed them in, pressing the earth firmly, and protecting from sun and wind for a few days. Outdoor plants should be transplanted early, before the leaves begin to develop.

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The Owen Electric Belt and Appliance Co., Chicago, Ill. GENTLEMEN:—I feel it a duty to write and inform you as to what your No. 4 belt has done for me as I have never written to you since I received it. For the last seven or eight years I have been afflicted with Sciatic Rheumatism and Nervousness, though not constantly, until last August when I was taken with another siege of the terrible disease. I tried everything I could hear of but received little or no benefit, and continued growing worse and worse. My hip and limb kept shrinking and I greatly feared I would lose the use of my limb and be a cripple for life. God alone knows what I have suffered—pen can never describe the agony. What more to do we did not know, but as a last resort, my husband sent for a Ladies' No. 4 Owen Electric Belt, to give it a trial, and if that did not do, he intended taking me to some medicated spring and try the bath system, but we had little faith in that. We received the belt Dec. 12, and after reading the directions carefully, we charged the batteries, and put the belt on at five (5) cells and wore it about six (6) hours, and that night I went to sleep and slept all night, something I had not done before for weeks, yes months, and from that time on I continued to improve. To-day I can truly say that I do not feel a rheumatic pain, and do not get the nervous spells which I did before wearing the belt. My hip and limb which was effected is just as well as the other. I can see no difference. If I could not get another Owen Electric Belt I would not take any money for mine. I would not want a belt that I could not increase or diminish the electric current, and I know of none so convenient as yours.

My husband has been wearing it for constipation, and Mother Emerson for headache and neuralgia, by simply holding the discs over parts affected; it never fails to bring relief in a few minutes. It does us all good. We could not, we would not be without it. I think the No. 4 belt the cheapest, for then I think the other appliances can be used with better effect. Some people might be able to wear it much stronger than others, but suffice it to say that the person must have a very thick skin who can wear it at 10 cells (full power) on each side six hours every day for a week and not feel it. I can not stand more than 3 cells. We recommend the Owen Electric Belt to everyone and have been the means of selling several. We will continue to do all we can to influence others to buy your belt and appliances. It is certainly a great invention and is just as represented in every way. I wish to say to everyone suffering from disease similar to mine, to buy an Owen Electric Belt and in a short time you will be well. If the belt does not give satisfaction, nine times out of ten the fault will be in the person that wears it and not in the belt. I remain your friend and well wisher.

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Our Farm.

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HOUSE WITH UNDERNEATH RUN.

THE house illustrated in this issue may be of any size preferred. Both front and rear views are given, so as to show the conveniences and advantages, and the slant of the roof and size of window may be changed to suit the builder.

Fig. 1, the front view, shows a house eight feet high in front and six feet at the rear. It is eight by twelve feet, with a paper or tin roof. The first floor should be of boards, covered with leaves or cut straw, so as to afford scratching. The nests are at the rear, a box being prepared for that purpose, so as to allow the hens all the floor room possible. A small step or board, at the right, allows the hens

vide milk, ground meat and bone, and finely-chopped clover. It is the variety of food that promotes egg production, and not bulk of grain. If the quarters are warm the hens should lay. Give them the opportunities to produce eggs and they will not disappoint you.

SELLING THE EXTRA FOWLS.

If extra stock is sold it should be done in May or June, or deferred to January. In May the best chicks can be retained for next year, and the surplus sold at a time when prices are well up. This applies also to fowls, as prices are so low in the summer and fall as to make it a matter of doubt whether they are sold or given away, if cost of transportation, commissions, etc., are deducted. The expense of retaining the surplus until late in the season more than balances the eggs received, if a large number of chicks have been hatched. The best prices are obtained for chicks, and the largest profits

THE MALES FOR NEXT YEAR.

As the males should be fully matured, and yet not too old, the proper way to secure them is to hatch them in the fall and keep them until they are eighteen months old, which will bring them in during the early months of spring. Being hatched in the fall such birds will be somewhat smaller in size than those hatched in the spring, but the chicks sired by them will be as large, at the marketable age, as those from the larger males. Males with small combs should be preferred, as they are less liable to the effects of frost, which sometimes causes the combs and wattles to be very sore, and even to slough off. This point should not be overlooked, as birds with frosted combs are unserviceable.

NEST-EGGS AND LICE.

Never use eggs as nest-eggs. The vices of egg eating and feather pulling sometimes come from the hens eating broken eggs, and when such a filthy thing as a rotten egg is left in the nest as an inducement, it is an indication of gross mismanagement, for they often burst and scatter their contents over the nests and floor, thus making the conditions most favorable for lice to breed and multiply. If nest-eggs are to be used let them be of china or porcelain, as they can then be washed and cleaned at any time, and the cost of them is but a trifle. Rotten eggs in nests, to be used as nest-eggs, are sure to breed lice, and in that case there will be fewer eggs laid by the hens.

KEROSENE EMULSION.

The well-known kerosene emulsion, which has been mentioned so frequently for spraying on fruit-trees, is perhaps the best and cheapest application that can be made to the walls, roosts and floors of poultry-houses for destroying lice. A sprayer is as useful in the poultry management as in fruit-growing, for with it and kerosene emulsion lice cannot only be destroyed but prevented. Begin on the work of destroying lice as early as possible, in order to prevent them from increasing. A few applications of the emulsion now will require but a short time, and it may save hours of labor later on in the season. Never wait for the warm days before killing lice in a poultry-house.

LAWN GRASS.

Lawn grass, when mowed, should be cured and saved for winter. It is one of the best foods that can be put away, as it is not only of convenient length, requiring no further preparation, but is usually composed of different grasses. It is not claimed for it that it is superior to clover hay, but the suggestion is made to save it for the hens because it can be easily raked up and cared for, instead of allowing it to not only be wasted, but render the lawn somewhat unsightly, instead of having a clean appearance.

OUTSIDE ROOSTS.

Will the tree top serve well as a roosting-place in summer? This depends on circumstances. On dry nights, in mid-summer, the tree tops are not objectionable, but the birds should not be exposed to storms at any season of the year. One thing that should not be overlooked is the fact that fowls cause trees and the ground around them to have a very filthy appearance, which may not be creditable to the farmer.

AN EXCELLENT FOOD.

Put a few ears of corn in the stove, or right on the coals, and permit them to toast. If some are partially burned to charcoal, so much the better. Feed the corn warm, and give it once or twice a week, as the charred corn will serve as a corrective, as well as provide an agreeable change, which the fowls will highly relish.

INQUIRIES ANSWERED.

Fertile Eggs.—J. C. Ashland, Col., writes: "I procured some pure-bred fowls, which were delayed in coming. My friends inform me that the eggs will not hatch until I have had the male three weeks. Please give your opinion."
REPLY:—Much depends on the age and condition of the hens. We have known eggs to be fertile the fifth day after the fowls were mated, and the time seldom exceeds ten days.
Blindness.—B. F. G., Anoka, Ind., writes: "Some of my chickens have become blind. They are very young, seem to have good appetites, and are only affected by blindness. Last year the roup affected my flock."
REPLY:—The cause may be cold draughts of air over them, but the probability also is that the roup has not been eradicated entirely, as blindness is an indication of one form of roup. It is too laborious to attempt to "doctor" a great many chicks, but sponging the face and eyes with warm elder vinegar is beneficial in such cases as mentioned.

FIG. 1.

to ascend to the second floor for roosting, a trap-door being in the second floor for that purpose, which is closed at night. The door for the upper room, with steps, is shown at the left. The entrances to the nests are plainly seen at the rear of the under floor, and the end of the nest-box is shown at the rear of the house, to the left.

Fig. 2, the rear view, shows the nest-box, the entrances to the nests and the nests, and also shows the box closed against rain. This arrangement permits of collecting the eggs without going inside of the house. On the upper floor is shown a drawer, under the roost, the droppings from the roost falling in the drawer, and removed by emptying the drawer, which can be pulled out without going inside the poultry-house for that purpose.

This plan does not necessitate going into the upper apartment but very little, and the lower floor affords ample shelter from storms, and allows plenty of light and air, as that apartment is open in front. The upper floor is three feet from the ground, and is simply a roosting-place, the hens occupying the lower part during the day, while the work can be done on the outside of the house for an entire year. When this is done the farmer will find that he can afford to sell eggs at a very low price; but if he will seek some market that demands his articles, he will seldom fail to receive remunerative prices for both poultry and eggs.

Considering the prices obtained for eggs in some sections it is doubtful if anything produced on the farm gives as large pro-

derived when the chicks are forced into market in a short time. Every day they are kept after May only adds to the cost, while prices are constantly on the decline until January. It is no gain at all to have the prices go down as the weights go up, but it is a loss of time, however. The hens and pullets that are selected to be kept over for another year will thrive better, and give a larger proportionate profit, than when the surplus stock is retained and the fowls and chicks crowded. From this time to January those selling fowls will be fortunate if they secure the cost of the food, but after Christmas prices usually advance, and the market is then never fully supplied. If the flock is still crowded, use the surplus on the table for the family.

THE DROPPINGS.

As warm weather comes there should be no accumulation of droppings under the roost. Keep plenty of dirt and plaster on the droppings-board, and sweep off the board every day. By so doing the work can be done in a few moments, and the house made more comfortable, while the fowls will be less liable to lice and disease.

CROSSING FOR EGGS.

Crossing for eggs is the crossing of certain breeds for the purpose of producing pullets that will lay well. Some of the non-sitting breeds are very hardy, and cannot be improved upon as layers, but some are tempted to cross non-sitters with the view of conferring benefit by a change of blood to a new breed, as well as retaining the non-sitting characteristics.

FIG. 2.

fits as the product of the hens. It is not always that the hens will lay many eggs in winter, but if a hen only provides one egg each week she will pay well for her board and lodging, and though eggs may not be numerous in winter the prices compensate for the scarcity. What the farmer should do is to induce his hens to lay by feeding a variety of food. In addition to wheat and corn he should pro-

Such a course is unsafe, as the crossing of two breeds of non-sitters usually produces pullets that make inveterate sitters. This fact has been demonstrated by repeated crossing of the Leghorns and Hamburgs (both non-sitting breeds), and the result has been a bird inferior to either parent, so far as laying qualities are concerned, but larger size, vigor and hardness were secured.

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Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Cold-storage House.—G. N. W., Smith's Point, Texas. Write to Jackson Refrigerator Co., 608 Rialto building, Chicago, Ill., for "Refrigeration," a scientific treatise on the subject.

Multiplier Onions.—F. S., writes: "Will Joseph kindly tell me how to grow what is called White Multiplier onion sets?"

REPLY BY JOSEPH:—Plant the bulbs in rows one foot apart, six inches apart in the row. Harvest when ripe and save some of the young onions for planting the following year.

Land-plaster.—A. C. W., Hugo, Ill., wishes to know if land-plaster is the same as plaster of Paris, and if the latter is of any value as a fertilizer. Land-plaster, or gypsum, is hydrous sulphate of calcium. Ground to powder, it is used as a fertilizer. When the water is driven off by heat, it becomes plaster of Paris. The latter, when mixed with water, hardens, and will not do for fertilizer.

Lime-Muck.—L. C. F., North Judson, Ind., writes: "How will I get the best results from air-slaked lime as a fertilizer on sandy soil? Will it pay to put it in corn hills? If so, when should it be applied and in what quantity?—Will it pay to put a shovelful of muck in the corn hill, the muck having been exposed to the air for about six months?"

REPLY:—Scatter the lime and muck broadcast before planting, and harrow in. Lime is not a fertilizer, but it makes plant food in the soil available.

Millet—Orchard-grass.—J. C. W., Phillipsdale, Pa., writes: "When is the time to sow millet?—When should orchard-grass be sown, and on what kind of soil?"

REPLY:—Millet is a warm-weather crop, and will bloom about six weeks after sowing. Sow it in June or the first part of July. Orchard-grass can be sown in the fall or spring. It is a good plan to sow it with clover early in spring on wheat. Probably the best soil for it is a moist clay loam.

Cucumbers Failing to Fruit.—M. P. W., writes: "Why is it that in some years we cannot raise cucumbers? Last year the vines were full of blossoms, and the little cucumbers grew until they were about an inch or two long. Then they turned yellow, withered and fell off. They had good care and plenty of water?"

REPLY BY JOSEPH:—If the vines remained thrifty, and were not affected by disease, I cannot imagine what has caused them to act so. I never fail in raising plenty of cucumbers and pickles when I plant the vines at proper distance apart in well-manured soil. Can any one among the readers of the FARM AND FIRESIDE suggest the cause?

Ants in Hotbed—Tomato-plants Dying.—R. W., Peoria, Texas, writes: "How can ants be destroyed in hotbed without injuring the plants?—I have a fine-looking lot of tomato-plants in cold-frame about six inches high; upon examining them I find that they break off at the surface of the ground. They appear to have been eaten around by something and rotted off from the effects. What is cause and remedy?"

REPLY BY JOSEPH:—Try poisoning the ants with a mixture of molasses, water and Paris green, or soak a sponge in sweetened water and place it in the hotbed. From time to time take it up, throw it in boiling water, and then bait and set it again.—The tomatoes evidently are affected by the same fungus which destroys many plants in various parts of the country. It is a new disease, and its nature not yet well understood. I cannot suggest a remedy, except using new, uninfected soil, perhaps spraying soil and plants with a weak fungicide, such as the Bordeaux mixture, or the ammoniacal solution of carbonate of copper.

Greenhouse Heating—Thomas Slag and Gas Lime, etc.—G. W. L., Eau Claire, Wis., writes: "How shall I lay pipes in hot-water heating to get a circulation of the water? I have an upright boiler.—What is Thomas slag? Can gas lime be used as a fertilizer?—How are cucumber pickles, after having been in brine, to be transformed in vinegar pickles?"

REPLY BY JOSEPH:—The pipes are usually laid above the level of top of boiler, with a gradual rise from the point where they enter the house to the expansion tank at opposite end. Manufacturers furnish all the fixings, and instructions besides. Write to Hitchlugs & Co., of New York City.—Thomas slag (basic slag, odorless phosphate) is a waste product of the iron industry, costing about \$18 or \$20 per ton, and containing about 20 per cent of phosphoric acid, which, although not strictly soluble in water, seems to be quite readily available for plant food. Gas lime is not a fertilizer, except in so far as lime is. When fresh it contains ingredients, such as sulphide of lime, that may be quite injurious to plant growth. When old, however, it is simply a mixture of carbonate and sulphate of lime. Consequently, if applied somewhat more freely, it may take the place of land plaster.—The cucumber pickles are taken out of the brine, soaked (freshened) in water, drained and then either heated in vinegar, or put in vessels and boiling vinegar poured over them. A few trials will show you the exact way how to proceed.

VETERINARY.

Conducted by Dr. H. J. Detmers, Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. DETMERS, 35 King Avenue, Columbus, Ohio.

Note.—Parties who desire an answer to their inquiries in this column, must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered under any circumstances. This time half a dozen anonymous inquiries found repose in the waste-basket.

Probably Puerperal Fever.—E. L. R., Galena, Ind. Your cow probably died of puerperal fever or puerperal eclampsia, sometimes erroneously called parturient apoplexy.

Lice on Sheep.—P. C. L., Dell Rapids, S. D., writes: "Please inform me what will kill lice on sheep and how to apply it?"

ANSWER:—Consult last number of FARM AND FIRESIDE.

Is Costive.—T. J. W., Bleecker, N. Y., writes: "I have a ten-year-old mare that is with foal. She is costive. I would like to know what to give her for a good physic."

ANSWER:—Send your mare to grass in a good pasture.

Gives no Milk.—F. B., Comox, B. C., writes: "I have a heifer, three years old next May, that had her first calf the 19th of this month, but gives no milk whatever. Would you advise breeding her, or trying her another year?"

ANSWER:—A cow that gives no milk, even when fresh, should be fattened and sent to the butcher. She is not good for anything else.

Chicken-lice.—C. S. P., Utica, Ohio, writes: "I have a colt that is lousy. The stable where I keep him is close to the chicken-house."

ANSWER:—The only treatment consists in removing the cause; that is, to keep the chickens and the horse away from each other. As long as that is not done the horse will be troubled. Chickens, and lousy chickens especially, have no business in the stable.

Cannot Stand Alone.—H. P. E., Turley. I cannot comply with your request because it cannot be determined from your communication whether a bone is broken, whether a joint is dislocated, or whether it is simply a severe strain and subsequent inflammation of some muscles. You, therefore, unless a veterinarian is available, will have to make a closer examination, especially of the bones which constitute the pelvis.

Possibly a Milk-stone.—C. L., Eureka, Ill., writes: "This spring I purchased a young cow with second calf. I find, since milking her, a lump in the upper part of one front teat. That lump must be pushed into the teat before the milk comes into it, and then it doesn't come free. What is it, and is there a remedy?"

ANSWER:—What you describe is possibly a milk-stone or concrement. If it is too large to be removed by milking through the teat, its removal will require a surgical operation, to be performed by a veterinarian.

May Have Worms.—L. C., Hope, Neb., writes: "My young saddle horse, though he is apparently healthy, with no sign of blemish, and is full of life and a spirited driver, is very poor in flesh and refuses all grain; I have tried him with corn, oats, chop-feed, etc., all to no purpose. He loses flesh and eats nothing but hay. His mouth is not swollen, and the best horsemen around here can assign no cause for his being in this condition."

ANSWER:—Your horse's chronic indigestion may be due to worms. The best you can do will be to turn the same out to pasture, and to keep him in a good pasture until fully recovered.

Offensive Discharge from the Ear.—S. J. C., New England, Ohio, writes: "My cow has a very offensive discharge from her ear. There is a raised place around the front part of her ear like a bone. She is in good order, and seems perfectly well."

ANSWER:—The offensive discharge comes from an ulcer or a fistula, but as your statement does not indicate the source of the discharge, and does not say whether it comes from a bone or a cartilage, the best advice I can give you is to call on a veterinarian to examine the ear of your cow, and apply the necessary treatment, which probably requires a surgical operation.

Effect of Spaying.—F. F., Dixon, Mo., writes: "I had a sow about four years old, which raised three litters of pigs. I had her spayed last April. Nine pigs ranged with her on acorn mast until December. I put her up and fed her on corn, bran, flaxseed and swill about four weeks. When I killed her, the entrails were grown into one side, fast in the lard, and all through them were lumps from the size of an egg to a marble; they were full of yellow matter. Did the acorns cause it, or the flaxseed and bran? I made soap grease of all but the hams and shoulders."

ANSWER:—What you complain of is the effect of spaying, and is not due to any other cause. An adhesive inflammation set in, and even abscesses were formed, which, fortunately, became encysted. You may congratulate yourself that your sow did not die in consequence of the operation.

Swelled Legs.—E. L. A., Mt. Sylvan, Tex. Feeding corn has not injured your mule, but if the frogs of the feet are rotten—in other words, if the mule has thrush—standing in mud or manure has. Cut away all loose and decayed horn, then while holding up the foot of the animal so that the toe is a little lower than the heel, pour some pure carbolic acid on the affected frog—enough to enter all the clefts and hidden places, but take care that the superfluous acid does not anywhere come in contact with the skin, but runs off at the toe. This done, put the mule in a stall with a dry and clean floor. Then search for sores, wounds or scratches anywhere below the hock-joint, and if you find any, bring them to healing by applying to them three times a day a mixture of liquid subacetate of lead, one part, and olive-oil, three parts. Further, see to it that the swelled legs, at least once a day, are thoroughly cleaned by rubbing them with a woollen rag. After the thrush is cured and the probably existing wounds or scratches are healed, reduce the swelling by giving suitable exercise during the day, and by keeping the swollen legs banded during the night.

A Deformed Hoof.—F. L. L., Morgan, Tex., writes: "About a year ago my horse cut his foot by stepping over a barbed wire, and pulling back. The cut extended from bottom of hoof from crease in heel, over the quarter

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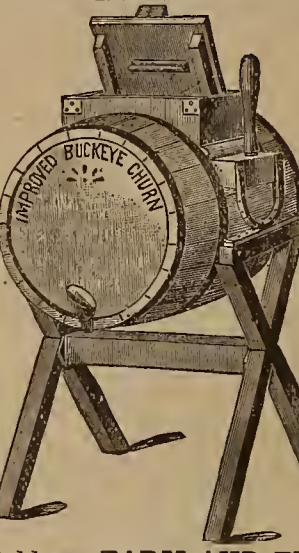


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and into the top of the hoof on the side. It was cut to the bone. I dressed it with iodoform and vaseline. It healed in about four months, but the natural crease in heel is grown over solid with a hoof-like substance, while there is a crack one quarter of an inch deep, from top to bottom, where the cut was made in top of hoof. I do not use the horse much, but the crack opens when he steps on that foot, and he limps on hard ground. I keep him shod, but his hoof grows very fast, and the bottom of it is easily crumbled. Can you tell me how to bring his foot back to shape?"

ANSWER:—Horny scars can be removed only by excision, and then the new scar produced is apt to be as large, or even larger than the old one, unless the new wound receives excellent care and attention. It will be very difficult to effect a union when the "crack one fourth of an inch deep" is existing. An attempt to do so would require a refreshing of the old wound, and even if the new wound is ever so carefully treated, success would be very doubtful. One thing, however, you can do; it is to relieve the horse from more or less pain or lameness by having the same shod with a bar-shoe, so made that no weight is borne by the degenerated part of the hoof. A good horseshoer will know how to do it.

A Split Ear.—W. L. Calhoun, Mo., writes: "My yearling colt split its ear last summer one inch from tip straight down. It is entirely sound but leaves an ugly fork. How will I heal it together so as to make it look natural?"

ANSWER:—A restoration of the split ear to a normal condition requires a surgical operation. At first the ear should be disinfected by thoroughly cleaning and washing it with an antiseptic; for instance, with a one permille solution of corrosive sublimate. This done, the borders of the old cut or split must be refreshed with a sharp knife or a sharp pair of scissors. The latter, probably, are preferable, but whatever instrument is used, it must be perfectly clean, and be made antiseptic by dipping it before using into boiling hot water. The wound, of course, must be refreshed in such a way that the borders of the same exactly fit together. Then the skin, internal as well as external, but not the cartilage, must be united by a suture. The latter, according to circumstances, may be made with *Carlsbader* needles, or by stitching with aseptic surgeon's silk. First the skin in the interior of the ear, and then the external skin, should be united. After the operation has been completed, the ear again should be washed with an antiseptic (a one permille solution of corrosive sublimate). If the operation is neatly performed and with all possible aseptic precautions, a union will be effected in at least forty-eight hours, and in about three days every other needle or stitch may be carefully removed, and on the next day the rest may be taken out.

Garget.—O. W. E., Ladoga, Ind., and I. M. M., Olden, Mo. Although inquiries concerning garget have been answered in nearly every number of this paper, I will once more make a plain statement. If the milk becomes coagulated or clotted in the mammary glands—lactiferous canals or milk cistern—the clots not only will act as a foreign body and cause irritation and subsequent inflammation, but will also act as a ferment, and cause the coagulation of all the milk with which they come in contact. Consequently, the milk as soon as secreted or produced will have become clotted. Hence, to stop the morbid process, the milk already coagulated and not yet coagulated must be frequently removed—in fact, the oftener the better. The only way to do it is through the teats, unless one is willing to sacrifice and to destroy the affected quarter by cutting off the teat or by splitting the same open lengthwise clear up into the milk cistern. Hence my so often repeated advice to milk thoroughly and to milk often. If neither clots nor fluid can be milked out any more, then, and then only, it is advisable to dry up the quarter by not milking it any more, and by applying externally an ointment composed of gum camphor and soft soap. If, however, the morbid process has resulted in suppuration, and if abscesses have formed, nothing is left but to lance and to open them, which frequently is best done by splitting open or cutting off the teats. Anything that unnecessarily irritates the mammary glands—for instance, sticking knitting-needles or milk-tubes into the teats—must be avoided. Salves, ointments and liniments, externally applied, also are irritating, and therefore injurious; at least, in all cases in which it is intended to save and restore the affected quarter. In severe cases of inflammation of the mammary glands, attended with high fever, a competent veterinarian should in all cases be called in as soon as possible.

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Our Miscellany.

"Is Jones a Christian?"

"Yes."

"To what denomination does he belong?"

"None. He is only a Christian as yet. He hasn't been converted long enough to become a sectarian."—*New York Press.*

BEECHAM'S PILLS cure Sick-Headache.

A JAPANESE doctor never dreams of asking a poor patient for a fee. There is a proverb among the medical fraternity of Japan: "When the twin enemies, poverty and disease, invade a home, then he who takes aught from that home, even though it be given him, is a robber."

AN AGGRAVATING SORE THROAT is soon relieved by Dr. D. Jayne's Expectorant, an old time remedy for Bronchial and Pulmonary affections.

"I HAD to be away from school yesterday," said Tommy.

"You must bring an excuse," said the teacher.

"Who from?"

"Your father."

"He ain't no good at making excuses; ma catches him every time."—*The Tub.*

IN this issue we present to our readers a new feature, which we have added to our premium department. A feature that is for the benefit of our subscribers only. The recent reduction in the prices of standard Waltham and Elgin watches, and the fact that in most cases the purchaser is still charged the old prices and not given the benefit of the reduction, has decided us to protect our subscribers against such unjust dealings and use our knowledge and ability to buy these goods at the lowest market price, in their behalf. We propose to give them the benefit of the present low prices and also save them the middleman's profit. We do this for our subscribers only, and any one not a subscriber desiring a watch must send 50 cents in addition to the cost of the watch, to pay for a year's subscription to either the FARM AND FIRESIDE or LADIES HOME COMPANION, to secure these prices. No limit is put upon the number of watches a subscriber may purchase, and advantage may be taken of these prices to any extent after your name is once on our list. Only genuine Waltham and Elgin watches are offered, because they are known the world over as the best watches made, and when the words genuine Waltham and Elgin are used they mean exactly that. We guarantee them to be just as represented in every way and equal to the same goods purchased of any jeweler. Every watch will be sent by registered mail, which insures safe delivery, with all the charges prepaid, so that the money sent us covers the entire cost. We invite the comparison of the prices and any watch sent out with those of any dealer. There is no risk or uncertainty in buying any of these goods, for we will make everything satisfactory or refund the money.

MORE MYSTERIOUS THAN EGYPT.

Judge Davidson, of Danvers, Mass., has returned home from an extended trip into Central America and Yucatan. The judge has been in that country for nine months and has obtained much valuable information regarding the ancient ruins of Yucatan, especially in and around the famous Uxmal. He left the United States on a trip for his health, but when he got to the southern country he heard so much of the ruined cities that he determined to try to get to them. The judge says that there is a wonderful field for research in that region, and when a properly organized expedition goes into the central part of Yucatan there will be found greater mysteries than are in Egypt. He says he was just on the border land of the mysterious country, but saw enough to convince him that the tenth is not known of those ruins, which have stood for long ages since the first civilized people populated the country.

He will endeavor to induce the people of Boston to aid in organizing an expedition which will thoroughly explore the hidden country. He says it will cost not less than \$100,000 to do it properly, and it will take at least three years' time; but he thinks that in the interests of the scientific discoveries which will result there will be no trouble in enlisting the aid of wealthy scientists who have the development of such countries at heart. Judge Davidson says it will be folly to attempt to do anything under three years, and the expedition will have to be composed of at least two hundred people, with supplies to enable them to go for a long time without depending on any outside assistance, for the interior country is almost totally uninhabited, and there will be no possible way to get food, as no native products are raised by the wild Indians, who, instead of being an aid, may be a detriment.—*New York Herald.*

VENTILATION.

One of the simplest methods of ventilating a room is to have a lower window slightly raised, a piece of wood firmly fitted in beneath it, and the space opened at where the upper and lower sash lap over each other is sufficient to give an upward current of air and ventilate a room without any direct draught. When there is a stove in the room at night, some method of ventilation is most positively necessary to health. Abundance of pure,

fresh air should be supplied even on the coldest nights, and the youngest child may become accustomed to this, providing it has abundance of bed-coverings and warm night-clothes.

There is no danger from colds so great as the danger from unventilated rooms. An open fire is one of the best means of ventilation, though an open window is necessary in connection with it at night. The hall is quite likely to contain half the bad air in the house. For this reason it is well to have a ventilating pipe from the ceiling of the main hall in the top of the house, well up above the roof. It should be covered with a cap to keep out the rainfall, and with a register to shut it off, if desired, in very cold weather.

GRUMBLERS.

If you find a man disposed to complain of the coldness of the world, be sure you will find he has never brought anything into the world to warm it, but is a personal lump of ice set in the midst of it. If you find a man who complains that the world is all base and hollow, tap him, and he will probably sound base and hollow. And so, in the other way, a kind man will probably find kindness all about him. The merciful man, as a general thing, will obtain mercy. He who has always had a kind excuse for others, who has looked at the brightest side of the case; he who has rendered his pardon and his help whenever he could, who has never brought his fellow-man into any straight by reason of not helping him, will find that the mercy which he has bestowed flows back upon him in a full, spontaneous spring. He will make a merciful world by the mercy he himself shows.

OUR BOOKS WON'T LAST.

Experts are predicting that the books of to-day will fall to pieces before the middle of the next century. The paper in the books that have survived two or three centuries was made by hand, of honest rags, and without the use of strong chemicals, while the ink was made of nut-galls. To-day much of the paper for books is made, at least in part, of wood-pulp treated with powerful acids, while ink is a compound of various substances naturally at war with the flimsy paper upon which it is laid. The printing of two centuries ago has improved with age; that of to-day, it is feared, will within fifty years have eaten its way through the pages upon which it is impressed. A heartless publisher who threw out this hint added the sardonic comment that the question was highly unimportant to the great majority of authors.—*New York Sun.*

LITTLE THINGS.

A COLD WEATHER NOTION.—A cold weather notion is the window roll. This is made of cheese-cloth, that most useful of materials, and is the length of the width of the sill and very narrow. It is filled with sand and serves to "stop a crack to keep the wind away," to slightly misquote. Care must be taken not to fill the bag too solidly, as it does not so well adjust itself as when loosely packed.—*Exchange.*

One teaspoonful of ammonia to a teacupful of water will clean gold or silver jewelry; a few drops of clear aqua ammonia poured on the underside of diamonds will clean them immediately, making them very brilliant.

BOGUS ALMONDS.—The wooden nutmeg of frand fame has been eclipsed by Dutch ingenuity. According to word sent from Utrecht to the wholesale grocers here, the Hollanders are making artificial almonds in large quantities from paste composed of glucose. They are shaped and colored to nature and steeped in nitro-benzole to give the necessary odor. Hundreds of bushels have been sold here to unscrupulous dealers, who mix them with the genuine article. The same people are at work on a varnished coffee bean.—*Philadelphia Record.*

Circles of felting, pinked or scalloped, are invaluable to put between choice china plates when piled in the closet.

For coffee stains, try putting thick glycerine on the wrong side, and washing it out with lukewarm water. For raspberry stains, weak ammonia and water is the best.

Wash gilding with water in which an onion has been boiled, and dry with a soft cloth.

A medical man says: "Be careful in your dealings with horse-radish. It irritates the stomach far more than spice, and an overdose will bring on an unpleasant sensation for days."

Watch the little things. Clean collars and shoes are mighty small things in a man's outfit; but their lack is enough to ruin all the effect of his other expenditure.—*Puck.*

Never bite or pass sewing silk through the lips, as lead poisoning has been known to result from such a habit, as it is soaked in acetate of lead to make it weigh heavier.

If you haven't noticed our Directory on page 4, it will pay you to do so.



MISS BEACH'S Curling Fluid.

Keeps the hair in curl for days innocent as cologne. A toilet necessity. Not sent on trial. 30,000 Ladies Have Endorsed It. At druggists, or prepaid, 50c. LADY AGENTS wanted. DENISON CHEMICAL CO., 56 (G) LaSalle St., Chicago, Ill.

Astonishing Prices

For the Benefit of our Subscribers only.

GENUINE

WALTHAM AND ELGIN
WATCHES.

GUARANTEED

Gold Cases,
Jeweled Movements.

The manufacturers of these celebrated watches, the Best in the World, have recently made big reductions in their prices, but many dealers continue to sell them at the old prices and pocket the additional profit. We believe that the benefit of the cut in prices should be given to the purchaser, and also knowing that many of our readers live where a good stock is never kept, we offer to our subscribers only any of the watches described below and give to them the advantage of the reduced prices, and also save them the middleman's profit. We offer only the genuine Waltham and Elgin, and guarantee them to be just as represented. Every watch sent out will be regulated and inspected, and only perfect goods will be mailed. When the watch is received, wind and set it carefully, and if not in perfect order write to us within three days, giving your grounds for complaint.

We will Make Everything Satisfactory or Refund the Money.

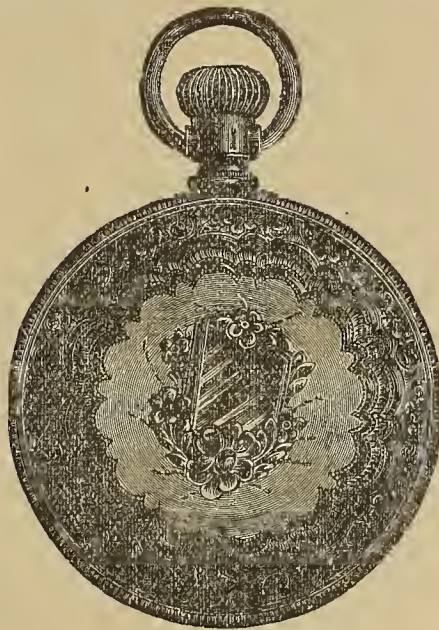
We do not guarantee these prices for any number of days. They may advance at any time. Order now, while they are at the bottom. The following are the best and most popular watches of both makes, from which to make your selection:

Offer No. 354.

WALTHAM OR ELGIN, \$5.50

To Our Subscribers Only.

Gentlemen's size, with seven jewels. Compensation balance and safety pinion, stem winding and setting, and all the latest improvements. The case is solid nickel-silver that will always hold its color, open face, with plate-glass crystal heavy enough to stand any strain. The usual price of this watch is from \$8.50 to \$12.50. Price to our subscribers only, by registered mail, postpaid, only \$5.50.



Offer No. 355.

OPEN FACE GOLD WATCH, \$12

To Our Subscribers Only.

Gentlemen's size, Waltham or Elgin, open face watch, stem wind and set, seven jewels and all improvements; gold filled case that is guaranteed to wear for fifteen years. An accurate time-piece that looks just like a \$100.00 solid gold watch. Watch clubs have been selling this watch for \$30.00. Price to our subscribers only, \$12.

Offer No. 358.

Full Jeweled
GOLD WATCH,
Open Face,
\$15.50

To Our Subscribers Only.



This is a fifteen-year guaranteed gold filled case, containing a fifteen jeweled movement, with all improvements mentioned in offer No. 357. The case is beautifully engraved and is made by placing two plates of solid gold over a plate of fine composition metal. The case is stiffened by the composition metal, and is much stronger than a solid case. It cannot be recommended too highly, yet the price to our subscribers is only \$15.50.

Address FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio.

Offer No. 359

Full Jeweled Hunting
Case, \$18.50

To Our Subscribers Only.

The same watch as offer No. 358, except this has hunting case.

Offer No. 357.

Full Jeweled Watch, Only \$10

To Our Subscribers Only.

A genuine Waltham or Elgin, fifteen jeweled watch, gentlemen's size, containing all the great patents, such as compensation balance, safety pinion, stem winding and pendant setting apparatus, breguet hair-spring hardened and tempered in form, patent regulator, etc. Cased in heavy nickel-silver case, open face, like that mentioned in offer No. 354. The movement alone in this watch usually sells at \$12.00 to \$15.00. We send the complete watch to our subscribers only, postage prepaid, for only \$10.



Offer No. 356.

Hunting Case Gold Watch, \$14.35

To Our Subscribers Only.

This is a magnificent gold filled hunting case watch, gentlemen's size, with Waltham or Elgin works, seven jeweled and all improvements, including expansion balance, plain regulator, etc. This watch sells readily for \$35.00. Remember, that our offer is for the benefit of subscribers only. The case is guaranteed by the manufacturers to wear for fifteen years just like solid gold. Price to our subscribers only, by registered mail, \$14.35.



Offer No. 360.

Gold Watch, Ladies' Size, \$13.50

To Our Subscribers Only.

This watch, either Waltham or Elgin, is a ladies' size, hunting case, engraved, seven jeweled movement; the case being warranted by the manufacturers to be standard and to wear for at least fifteen years. Any lady in the land would be proud to own such a watch. It is a true time-keeper, and usually sells at from \$18.00 to \$25.00. Any subscriber getting one and wishing to sell it at any time should get at least \$20.00 for it. Price to our subscribers only, by registered mail, only \$13.50.

IN ORDERING BE SURE to state the number of the offer, whether you want Elgin or Waltham, and give the price, that we may understand clearly just what you want. We can furnish Solid Gold Watches to any of our subscribers far below store prices. Send 2-cent stamp for prices.

No watches will be sent C. O. D., for we guarantee satisfaction or refund the money.

If you are not a subscriber to either the Farm and Fireside or Ladies Home Companion, send 50 cents in addition to your order, which will pay for one year's subscription to either paper and entitle you to a subscriber's privilege of purchasing as many watches as desired.

Smiles.

KNIGHT ERRANDRY.

In a quaint corner where
Old houses front the square,
She stood in deep despair,
Holding her skirt.

Gazing with rueful eye,
At one small Oxford-tie,
Whose shoe-string, gone awry,
Dragged in the dirt.

Could she stoop, laced so tight?
Her gloves were new and light;
I saw her helpless plight,
And tied her shoe.

She thanked me, flushed with shame,
Tripped back the way she came,
"Who was she, and her name?"
I never knew!

—Life.

PUT OFF AT SYRACUSE.

Now, see here, porter," said he briskly, "I want you to put me off at Syracuse. You know we get in there about six o'clock in the morning, and I may oversleep myself. But it is important that I should get out. Here's a \$5 gold piece. Now I may wake up hard, for I have been dining to-night and will probably feel rocky. Don't mind if I kick. Pay no attention if I'm ugly. I want you to put me off at Syracuse."

"Yes, sah," answered the sturdy Nubian, ramming the bright coin into his trousers' pocket. "It shall be did, sah!"

The next morning the coin-giver was awakened by a stentorian voice calling: "Rochester! Thirty minutes for refreshments!"

"Rochester?" he exclaimed, sitting up. "Where is that coon?"

Hastily slipping on his trousers, he went in search of the object of his wrath and found him in the porter's closet huddled up with his head in a baudage, his clothes torn and his arm in a sling.

"Well," says the drummer, "you are a sight. Been in an accident? Why didn't you put me off at Syracuse?"

"Wha-at!" ejaculated the porter, jumping to his feet, as his eyes bulged from his head. "Was you de gemman what guff ter me a five-dollah gold piece?"

"Of course I was, you idiot." "Well, den, befoah de Lawd, who was dat gemman I put off at Syracuse?"—*Clothier and Furnisher.*

RECOGNIZED THE LIKENESS.

Mary, the nurse girl, comes in from a walk in the park, carrying the pride of the family, a young gentleman whose age amounts to some fourteen months.

"Oh, ma'am, little George spoke this afternoon for the first time!"

"Really! What did he say?"

"Why, when I was showing him the animals he made me stop before the cage of monkeys, and clapping his little hands several times, he called out: 'Oh, papa, papa!'"—*New York Herald.*

THE DIFFERENCE.

Mrs. Pugh—"Oh, yes; just because it is a little damp out you won't go to church. The pouring rain didn't keep you home from the theater the other night."

Mr. Pugh—"If I had remained home from the theater the other night I would have lost the four dollars I paid for tickets; but if I stay home from church this morning I'll be in fifty cents."

GEORGE CATCHES ON.

"Katie," he said, timidly, "I—I have allowed myself to hope that you regard me as something more than a friend."

"George," she answered softly, with half-averted face, "you—you are away off." And George understood. He came nearer.

—Chicago Tribune.

A NECESSITY NOW.

Mrs. Gazzam—"George, you really must get me a piano."

Gazzam—"Nonsense, Nell! You don't know one note from another."

Mrs. Gazzam—"That's true, but I must have a piano, because papa has given me a piano-lamp for a birthday gift."

COULDN'T STAND IT.

Mrs. Van Bibber—"Our cook left this morning."

Mrs. Blecker Van Twiller—"What was the trouble?"

Mrs. Van Bibber—"She objected to my cooking."

THOROUGHLY TIRED.

Doctor—"My dear madame, there is nothing the matter with you—you only need rest."

"But, doctor, just look at my tongue!" "Needs rest too, madame."

A COMPREHENSIVE REPLY.

Teacher—"Who was the strongest man?"

Tommy—"I reckon Sampsen was the strongest in a fight; but I'll bet Ananias was the strongest with his party."—*Life.*

MAN'S BEST WORK NOT DONE.

"It is said that an honest man is the noblest work of God. What do you think is the noblest work of man?"

"My notion of it is that an honest dollar will be about right when he makes it."—*Boston Post.*

ROMANCE OF THE NINETEENTH CENTURY.

He—"But, Helen, give me some word of encouragement. Do not leave me so coldly. You know how I love you, that I would give my life for you if you asked it."

She—"And how much insurance do you carry on your life?"

A MONOPOLY.

Juno—"I want a couple of your strongest winds to raise a storm on the Atlantic immediately."

Æolus—"I am sorry, madam; but all our strongest winds have been in use in Chicago since the world's fair was located there."

ONE SYMPTOM MISSING.

Doctor—"Did you have much of a chill?"

Fair patient—"It seemed so."

Doctor—"Did your teeth chatter?"

Fair patient—"No; they were in my dressing-case!"

LITTLE BITS.

She—"My darling, I have a terrible piece of news for you. Papa has lost everything."

He (rising to go)—Oh, no, he hasn't. He still has you.—*Truth.*

"Hello, old man, have any luck shooting?"

"I should say I did! Shot seventeen ducks in one day."

"Were they wild?"

"Well—no—not exactly; but the farmer who owned them was."

"My son," said the pious gentleman to the boy who was playing leap-frog in the front yard, "don't you know this is Sunday?"

"You're right I do! Mammy's gone to camp-meeting, sister's run off with a hook-agent, the baby's smokin' cigarettes, there ain't nothin' to eat in the house, an' pap's cussin' the Methodists."

Pat had been suffering with a severe and prolonged attack of the grippe.

"Well, Pat," said a friend, meeting him on the street, "I hear you've been having a pretty hard time of it."

"Faith an' I have," said Pat. "An' it's the right name they give to it, too, for when it once takes hold of a man it's no mind to let go. It took me thraa wakes to fale better after I was intoirely well."

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You need work. (If not this adv. does not interest you) You can make \$75 to \$250 a month, provided you work with a little vim, vigor, pluck and push. We have got something new. It costs nothing to investigate. Must have a live, wide-awake representative in your community, either man or woman at once. All information cheerfully sent by return mail. Better write to-day. Address in full, **THE STANDARD SILVERWARE CO., ORDER DEPT. 501 BOSTON, MASS.**

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A SURE and permanent cure for Epilepsy, Fits, in 24 hours. Free to poor. **A. A. Ferdinand, St. Louis, Mo.**

Selections.

OLD EARTH'S HARVEST TIME.

JANUARY sees harvest ended in most districts in Australia and New Zealand, while the people of Chili and other countries of southern South America are just beginning to reap the fruits of their toil.

Upper Egypt and India begin and continue harvest through the months of February and March.

April enlarges the number with harvest in Syria, Cyprus, coast of Egypt, Mexico, Cuba, Persia and Asia Minor.

May is a busy time in central Asia, Persia, Algeria, Morocco, southern Texas, Florida, China and Japan.

June calls forth the harvest in California, Oregon, southern United States, Spain, Portugal, Italy, Hungary, Roumania, Turkey, Danubian states, southern France, Greece and Sicily.

July sees harvest in England, Nebraska, Switzerland, Iowa, Illinois, Indiana, Minnesota, Upper Canada, northern France, Germany, Austria and Poland.

August continues the gathering in the British Isles, France, Germany, Belgium, Holland, Manitoba, Lower Canada, Denmark and Russia.

September rules northern Scotland, southern parts of Sweden and Norway, as well as the cold islands of the North sea.

October is the harvest month for corn in America and for hardy vegetables in northern Sweden, Norway and Ireland.

In November harvest times begin in south Africa, Patagonia and south Australia.—*New York Tablet.*

OUR RYE EXPORT.

One of the curiosities of the year is the rye export, which from July 1, 1891, to March 1, 1892, was 9,495,408 bushels, with an export value of 96½ cents per bushel, against 322,912 bushels for the same time the previous year. It shows the large aggregate of mysterious supplies that come in right under the stimulus of an active demand at a high price. By comparison, the price per bushel in 1890-91 was 63 cents. In this country rye is so overwhelmingly overmatched by other cereals that it is only when an unexpected supply turns up that its real importance is noticed. Its low price in years of normal crops in Europe is, of course, the reason why general attention is not given to its culture, but as our last crop was sown before the European shortage was fully recognized, it is a puzzle how we came to

have so much to spare, or what we have done with the surplus in former years, when there was almost no foreign demand.—*Corn Miller.*

A LARGE GLOVE INDUSTRY.

At Grenoble, France, it is said that 1,200,000 dozen pairs of gloves are manufactured annually. This represents a value of \$7,000,000 to \$7,200,000, and gives employment to 25,000 work people of both sexes. There are 4,000 men and 21,000 women residing in a rayon of 38 miles around Grenoble, who live by this work. Glove making, then, is interesting from a social point of view, as it is one of the few callings open to female labor in which they can earn respectable wages without abandoning husbands, homes and little ones. The writer adds that out of the \$7,200,000 worth of gloves made in that region at least \$3,000,000 are distributed in wages among an almost infinite number of families.—*New York Recorder.*

WHAT IT REQUIRES TO FEED A MAN.

The amount allowed by the United States as a daily ration for a soldier is, of meat, either 12 ounces of pork or bacon or canned beef, whether fresh or salt, or of fresh beef 20 ounces, or of salt beef 22 ounces. For bread, 16 ounces of hard bread, or 18 ounces of soft bread, or 18 ounces of flour, or 20 ounces of corn-meal. With the flour must go four ounces of yeast-powder to each 100 rations. In each 100 rations there shall also be 15 pounds of beans or peas, or 10 pounds of rice or hominy. Only one of the four goes with the 100 rations. For drink, with each 100 rations goes either 10 pounds of green coffee, or eight pounds of roasted coffee, or two pounds of tea. Fifteen pounds of sugar are allowed to sweeten it; four quarts of vinegar, four pounds of salt and four ounces of pepper serve as the daily condiments for 100 men, and they are also entitled to four pounds of soap to wash themselves and their clothing, and 1½ pounds of candles to light up their tents till after "taps." Any one curious in figures can estimate the cost of feeding 100 men per day. Old soldiers say the above rations were enough, when they got them, but they sometimes missed a part of them. Under some circumstances quartermasters or commanding officers are allowed to change some of these rations for other articles, as to substitute potatoes for the rice or hominy, or to furnish other vegetables, or to give molasses instead of sugar, but this privilege was sometimes abused, the surplus rations being sold, but the extras to take their place not being bought. Butter and cheese do not form any part of the ration.

Even if you intend to buy your implements of your local dealer, it will pay you to send for catalogues of the first-class manufacturers named in our Directory, on page 4, as you can thus learn of the best that is made and be able to get it through your local dealer, otherwise he may sell you anything he has and you will not know whether you have the best or not.

Recent Publications.

EXPERIMENT STATION BULLETINS.

Sent free, on application, to residents of the state in which the station is located. Address Agricultural Experiment Station.

UNITED STATES DEPARTMENT OF AGRICULTURE.—(Washington D. C.) Experiment Station Record, Vol. III, No. 8. Farmers' bulletin No. 7. Spraying fruits for insect pests and fungous diseases.

ALABAMA.—(Auburn) Bulletin No. 34, January, 1892. Co-operation soil test experiments. CONNECTICUT.—(New Haven) Annual report for 1891.

DELAWARE.—(Newark) Bulletin No. 9, 1890. Creamery studies of methods and machinery.

GEORGIA.—(Experiment) Fourth Annual Report for 1891. Bulletin No. 17, March, 1892. Irish potatoes, sweet potatoes, tomatoes, prize plants.

ILLINOIS.—(Champaign) Bulletin No. 19, February, 1892. Experiments with oats, 1891. The chinch-bug in Illinois, 1891-92.

INDIANA.—(Lafayette) Bulletin No. 38, March, 1892. Small fruits. Treatment of powdery mildew and black rot. Vegetables.

KANSAS.—(Manhattan) Bulletin 28, December, 1891. Second report of experimental vineyard.

NEBRASKA.—(Lincoln) Fifth annual report. Bulletin No. 21, March, 1892. Experiment in the culture of the sugar-beet in Nebraska.

OHIO.—(Columbus) Bulletin No. 1, Vol. V. Oats including comparison of varieties; distribution of seed; methods of planting; treatment for smut.

ONTARIO.—(Agricultural College, Guelph) Bulletin No. 71, February 22, 1892. Experiments with spring grains. Bulletin No. 72, February 29, 1892. Roots, potatoes and fodder corn.

OREGON.—(Corvallis) Bulletin No. 16, February, 1892. Notes on varieties and yield of wheat. Bulletin No. 17, February, 1892. The sugar-beet.

NORTH CAROLINA.—(Raleigh) Bulletin No. 83, February 19, 1892. Growing celery in the South. Cultivation of onions. Notes on horticultural work during 1891.

NORTH DAKOTA.—(Fargo) Bulletin No. 5, February, 1892. Sugar-beets.

SOUTH DAKOTA.—(Brookings) Bulletin No. 27, November, 1891. The sugar-beet in South Dakota.

TEXAS.—(College Station) Fourth annual report for 1891.

VIRGINIA.—(Blacksburg) Annual report for 1891.

WEST VIRGINIA.—(Morgantown) Bulletin No. 20, January, 1892. Potato culture and fertilization. Tests of some varieties of tomatoes. Bulletin No. 21, April, 1892. Injurious insects and plant diseases.

WISCONSIN.—(Madison) Bulletin No. 30, January, 1892. Sugar-beet experiments in Wisconsin for 1891.

WYOMING.—(Laramie) Circular No. 3. Sugar-beet experiments for 1892. Bulletin No. 4, December, 1891. Meteorology for 1891. Bulletin No. 5, February, 1892. Best varieties and breeds for Wyoming.

NAMES OF PRIZE WINNERS.

For the Week Ending April 23d, 1892.

A. T. Porter, Brimfield, Ohio, was awarded his choice of First Grand Prizes offered, for sending 17 subscribers, the largest club received during the week.

Ella Demaree, Geneva, Nebraska, was awarded her choice of the Second Grand Prizes offered, for sending the second largest club, 13 subscribers.

For the Week Ending April 30th, 1892.

Ronson German, New Baltimore, Mich., was awarded his choice of the First Grand Prizes offered, for sending 60 subscribers, the largest club received during the week.

Mary A. Pence, Pana, Ill., was awarded her choice of the Second Grand Prizes offered, for sending the second largest club, 23 subscribers.



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DESCRIPTION OF THE PICTURE.

The scene which the picture portrays was enacted in the Court of Spain before Queen Isabella and King Ferdinand. The picture shows Christopher Columbus explaining his theories in support of his belief in the existence of a western continent and pleading for sufficient means and support to enable him to make a voyage of discovery. He stands, one of the prominent figures in the picture, addressing the Queen and assembled members of the court, his face showing plainly his intense earnestness and his burning desire to impress his hearers with the benefits and honors that would accrue from the success of such an expedition. The other equally prominent figure is the beautiful queen seated a little above and surrounded by her lords and ladies. Her attitude shows plainly her deep interest in the words of Columbus, she is leaning slightly forward as though fearing to lose some of his remarks. The beauty and interest of the scene is greatly heightened by the approach of an attendant bearing the costly jewels that the queen had just offered to pawn for the necessary funds to equip the ships for an expedition. She assumed the undertaking in her own name and in her own right. The commanding figure of Columbus, the queenly beauty of Isabella, with her womanly sympathy clearly expressed in her countenance, the sparkling jewels, and the other personages grouped about make a rare subject for an artist's brush—a subject demanding the work of a master hand. It is fortunate that it fired the artistic genius of such an artist as M. Brozik, who has given to the world a picture that will perpetuate both his name and the scene which he has so graphically drawn.

THE ARTIST.

Vaclav Brozik, the artist to whose magic pencil we are indebted for this faithful representation of the first act in American history, was born at Pilsen, Bohemia, in 1852. As soon as he could handle a pencil he began to draw. His evident talent induced his relatives to make him an artist. He studied at the Academy of Art in Prague, under the foremost living artists, Piloty and Mackay. His pictures soon began to attract attention, and brought him great fame and honor. His name was heard in all art circles, and lovers of art made long journeys to study his pictures. Brozik is not unknown in America. Many of his small pictures grace the private collections of American art-lovers.

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RIVALING THE ORIGINAL PAINTING

in beauty and the effectiveness with which the artists have perpetuated the scene, which was the beginning of American history. All the grandeur and impressiveness of the occasion has been transferred to the canvas in such a realistic way that the beholder seems transferred to the presence of the court and almost hears the words of Columbus.

QUEEN ISABELLA.

To Queen Isabella Columbus was directly indebted for the means, the men and the ships to fit on his expedition of discovery. Her support of the undertaking stands out in marked contrast to the timidity and doubting of many of her advisers, who could see nothing but the imaginings of a dreamer in the theories of Columbus. She was exceedingly beautiful—"the handsomest lady and the most gracious in her manners of any one whom I ever beheld," says one of her household. Her complexion was fair, her hair of a bright chestnut color, and her mild blue eyes beaming with intelligence and sensibility. A portrait still existing of her in the royal palace is conspicuous for an open symmetry of features, indicating her natural serenity of temper and the beautiful harmony of intellectual and moral qualities that so signally distinguished her. She was dignified in demeanor and very modest, even to a degree of reserve, yet her nobleness of heart and mind made her beloved unto all her subjects and almost worshipped by those who were in her personal favor. Whether considered as she rode about through her kingdom, as she was wont to do, much of the time on horseback, or among the lords and ladies at her court, with all its magnificent surroundings, or at the head of her armies, leading and cheering them forward as none of their mighty generals could do, she was always the same generous, true and lovable woman—a leader of her people. Such a woman it was who undertook this enterprise, which had been explicitly declined by other powers, and who, against opposition from her own advisers, said: "I will assume the undertaking for my own crown of Castile, and am ready to pawn my jewels to defray the expenses." It was thus she expressed herself after hearing the proposals of Columbus and seeing them in their true light, one point of which, the carrying of the gospel to the new and undiscovered country, had a great influence upon her. No sooner had she given her support to the project than she prepared to forward the preparations with all her characteristic promptness and enthusiasm, and she remained true to her agreement with Columbus during his several voyages and until her death. This beautiful queen is one of the prominent figures in the picture, and the honor of the discovery of America is justly shared by both Queen Isabella and Christopher Columbus.

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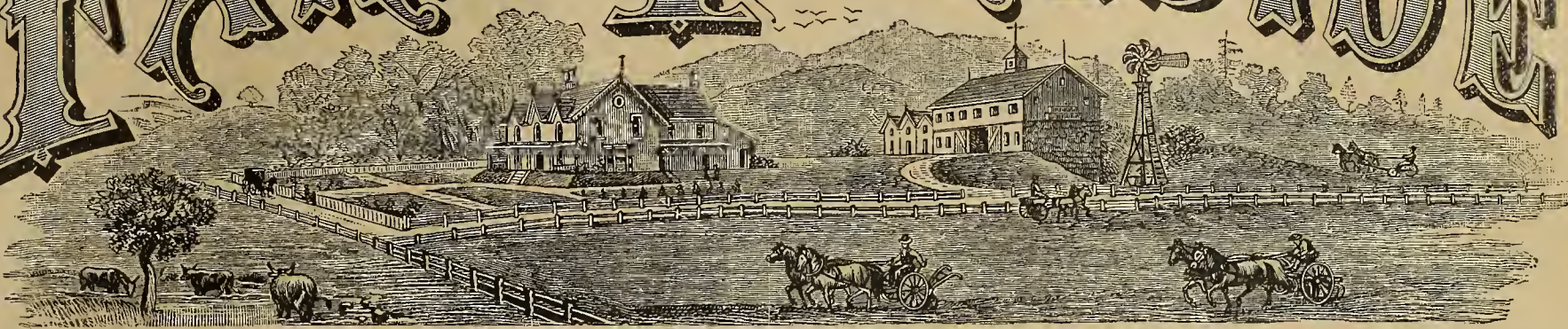
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FARM & FIRESIDE



EASTERN EDITION.

VOL. XV. NO. 17.

PHILADELPHIA, PA., and SPRINGFIELD, OHIO, JUNE 1, 1892.

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Current Comment.

THE Ohio world's fair commission will duplicate many of the premiums awarded by the Columbian exposition to Ohio exhibitors.

Every cultivator of the soil, every wool-grower, stock-breeder and dairyman who is interested in having the best agricultural products of Ohio shown at the world's fair should apply to the executive commissioner for Ohio, Daniel J. Ryan, Columbus, for bulletins containing rules and information regarding exhibits. A double award awaits the successful Ohio exhibitor. Ohio is invited to make a complete exhibit of her choicest agricultural products. And every citizen has an interest in making this exhibit a grand one.

FOR the purpose of getting some information first-hand on the hemp industry, we recently visited the largest hemp twine factory in the United States. The whole process of manufacture, from the rough hemp as it entered the breaker to the finished ball of twine, was shown and fully explained. And after a careful investigation, we would say that we have nothing to take back of what has been said in these columns regarding the merits of this American-grown and home-manufactured article. Our principal object was to find out what there is in the industry for hemp growers.

The company manufacturing the twine rented land and raised hemp, not only for the purpose of getting a supply of raw material, but to demonstrate to the farmers of Illinois that hemp-growing is profitable for them. The following is a brief summary of the information obtained regarding the hemp industry of the country:

Only thirty thousand acres of land in the United States are devoted to hemp culture; and over 95 per cent of that is in Kentucky.

The Illinois method of culture differs from that of Kentucky. The land is plowed in the fall. The seed is sown from the middle of March to the first of June, the earlier sowing being preferable. The crop matures in about one hundred days. It is cut with a mower, and left on the ground until it has received a few showers of rain. It is then raked up and run through a power breaker, to separate the fiber from the woody part of the stalk, or stacked up like hay. The cost of culture, including \$5 for rent of land, is

\$15 an acre. The net profits are \$15 to \$20 an acre. Rich loam that produces big stalks of corn will produce the most profitable crops of hemp.

Kentucky growers spend a great deal of hand-labor on the crop. Hand-breakers are used, and the fiber is carefully kept straight in "hands." Northern growers pay no attention to keeping the fiber straight, and handle the crop with labor-saving machinery at much less expense. The improved cordage machinery does not require the fiber to be straight.

The hemp industry is making progress. The twine factory visited has enlarged its capacity from three to sixteen thousand pounds a day. It would take two million acres of land to produce the fiber for the twine cordage annually used in the United States, one half of which is binder twine. The hemp industry has a large and profitable field before it.

THE following circular from the department of agriculture to the wool-growers of the United States fully explains itself:

The agricultural department will exhibit, at the Columbian exposition, between three and four thousand wool samples from all parts of the world. They will cover all classes of wool, from the highest to the lowest. Especial attention has been given to the selection of samples of wools that compete with our home-grown wools. These were procured through a special agent of the treasury department, sent abroad for the purpose of procuring samples for custom house standards.

The department is desirous of obtaining the American samples direct from the growers, so that comparison can be made with wools of the same character, grown in different parts of the country. The samples will be placed in glass jars labeled with the grower's name and address, also with description of sheep and wool. Assistant Secretary Willits is giving wool and sheep especial attention, as he is desirous of furthering the interests of this great industry. With this view he has requested Hon. John T. Rich to make a report to accompany this exhibition.

Each sample should be about one pound in weight and be taken from the body of the fleece. Tags for the same and blank invoices are furnished by the department.

Samples can be mailed without payment of postage.

Should you desire to have your clip represented, please address for particulars, Edward A. Greene, Philadelphia, Pa., or John T. Rich, Elba, Lapeer Co., Mich.

RECENTLY we visited the famous Elgin (Ill.) dairy district and inspected several co-operative creameries. Every opportunity was kindly afforded by the managers for a thorough investigation. Patrons, stockholders and managers replied to all inquiries and willingly gave full information about the business. Even the books of the associations, containing the daily, monthly and yearly statements of the business done, were opened. The cost of the plants, the number of pounds of milk received, the number of pounds of butter made and sold, the gross receipts, the cash paid patrons, the running expenses and the net profits were all given. Patrons sub-

mitted statements of the daily and yearly product of their herds, the cost of keeping them and the average annual returns per cow.

From authentic data thus collected we give the following general summary:

In the Elgin district the farmers receive an annual average of a cent a pound for milk. Their common dairy cows yield a daily average through the milking season of about twenty pounds of milk. The yearly returns per cow run from \$50 to \$75, averaging about \$60. The cost of keeping a cow a year averages about \$30.

The skim-milk is usually hauled home by the patrons, and valued at ten cents a hundred pounds, or less than a cent a gallon. The large majority of the cows kept are common stock, well named "first-class mongrels." It was surprising not to find in this celebrated butter district more good butter cows. A number of the dairymen have silos, and feed ensilage.

The creameries visited are very successfully managed on the co-operative plan, which is decidedly the better plan for the milk producers. Many, but not all, of the patrons are stockholders.

The running expenses and profits of the creamery associations come out of the three cents a pound charged for making and selling the butter. The price of milk is fixed each month by the price of butter.

In brief, the improved separator system may be described as follows: The fresh, whole milk is delivered to the factory every morning by nine o'clock. Each patron's milk is weighed separately, and credited to him on the milk list. Samples are frequently taken out for the chemical tests for the butter fat, to determine if the quality of the milk is up to the standard and to checkmate the wind-pump. From the weighing-can the milk runs into the tempering-vat, where it is brought to a temperature of 80 degrees Fahrenheit. Then it goes to the reservoir above the centrifugal cream separator. From this it flows in a graduated, uniform stream gently down a center tube to the bottom of the rapidly-revolving bowl of the machine, where separation gradually commences. Thence it is thrown outward to the periphery of the bowl and upward through the skim-milk discharge-pipe. The cream rises in the form of a wall inside of the skim-milk and flows out of a hole in the upper part of the bowl. The capacity of the machines in use varies from a hundred to four hundred and fifty gallons of milk an hour. The cream is placed in a vat, cooled down to 62 degrees Fahrenheit, and left until the next morning to ripen or develop the proper amount of acidity. The usual power churns and butter-workers finish the process. And the fine, granular butter of sweet, nutty flavor, packed in tubs, stands in the cool room ready for the markets of the world, within thirty-six hours from the time the milk was drawn from the cow.

The creameries visited were model ones in every respect. Expert butter makers were turning out the choicest granular butter, and good business men were looking after the affairs of the association. The factories were equipped with the latest improved apparatus. Shares in the company are now worth one and a half and two times their par value. The net profits, in some cases, are over fifty per

cent per annum on the capital invested. The open secret of this financial success, for both milk producer and creamery association, is good business management and the use of good centrifugal cream separators.

The cream-gathering plan has been abandoned. The cream separation system has taken its place. The factories in the Elgin district now secure an annual average of four and one half pounds of butter from each hundred pounds of milk. This is from the milk of ordinary dairy cows, not from the milk of the butter breeds. By the ordinary methods of cream raising, the same quality of milk formerly produced in this district an annual average of only three and a half pounds of butter from each hundred pounds of milk. Chemical tests of the skim-milk from good separators show only one tenth of one per cent of butter fat; sometimes not a trace.

The improved separator system of creaming milk fresh from the cow, now in general use in the Elgin and other famous butter districts, has made a revolution in the dairy industry. The increased yield of butter and the increased price obtained for creamery over prime country dairy, taken together, actually double the money received by the farmer for his dairy products.

OHIO annually produces 54,000,000 pounds of butter, only 7,000,000 of which are made in creameries. Many of the creameries still use the old cream-gathering plan. If the separator system can do in Ohio what it has done elsewhere, it is safe to say that the same amount of milk now used for butter making would yield over 65,000,000 pounds. This is a conservative estimate.

At this writing butter quotations in the Cincinnati market are: Creamery, 20 and 22 cents a pound; prime dairy, 8 and 10; common, 6. The annual average price of Elgin creamery last year was 25½ cents a pound. Deducting three cents a pound for manufacturing and selling, the possible 65,000,000 pounds of butter, by the cream separator system, would be worth to the farmers of Ohio \$14,600,000, which is more than double the value of the present entire home dairy and creamery product of the state. Admitting that these figures may be only approximately correct, they still serve to fully illustrate how farmers can realize more money for their dairy products.

THE centrifugal cream separator has been in process of evolution for thirty-three years. The first known application of centrifugal force for the purpose of creaming milk was made in 1859. In its development the process has passed through three distinct stages. In the first, pails were hung to a revolving wheel. In the second, vertical cylinders partly filled with fresh milk were revolved. As soon as the cream had separated from the milk, valves were opened and the skim-milk thrown out by the motion of the machine. The machine was then stopped, the cream removed, a new supply of fresh milk put in, and the operation repeated. In the last stage, we have the continuous separator receiving a continuous flow of fresh milk and discharging the cream and skim-milk separately.

FARM AND FIRESIDE.

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Our Farm.

DEPRESSION IN THE PRICE OF WHEAT.

Depression in prices has been a topic of
interesting discussion for some time, and
causes attributed have been as varied as the
arguments, in many instances, have been
fallacious. It is not my intention to
enumerate all the causes that have con-
tributed to shrink farm values, but to
present merely the most important.The potency of supply and demand in
shaping the destiny of prices has never
been fully realized. An advanced price,
caused by active demand, has always
stimulated farmers to so increase the pro-
duction of that particular commodity, that
depressed values were the inevitable re-
sult the following year. Demand must,
of necessity, accommodate itself to short
supply at high prices, but never to over-
supply, at any price. We have been
producing our principal crops seemingly
upon the theory that the appetite of the
world's markets was insatiable and that it
would ruin its digestive organs in an
attempt to consume all the corn, wheat
and oats we might deem proper to pro-
duce. The wind and tide of production
will make landing on the shores of re-
munerative returns impossible so long as
it is not recognized that more must not be
produced than is consumed.The depressed prices of wheat and
cotton have, very naturally, commanded
the attention of the general public, more
so than the prices of other commodities,
and in view of the able articles on de-
pression of cotton that were recently
published in this paper, I will direct my
remarks to the depressed condition of the
price of wheat.Those who are not familiar with the
wheat statistics of the world would
naturally arrive at the conclusion, should
they rely upon the newspapers and other
unauthentic reports, that in every country
except our own production was declining,
and that the United States were expected
to make up the entire shortage. The
following statement shows the production
and exportation for the past three years
of the countries that furnish the commer-
cial supply:

| YEARS. | UNITED STATES. | | RUSSIA. | | INDIA. | |
|--------|----------------|-----------------|-------------|-----------------|-------------|----------------|
| | Production. | Exports. | Production. | Exports. | Production. | Exports. |
| | Bushels. | Bushels. | Bushels. | Bushels. | Bushels. | Bushels. |
| 1889 | 490,560,000 | (1) 88,600,743 | 178,483,452 | 126,114,840 | 243,076,000 | (4) 26,654,477 |
| 1890 | 399,262,000 | (1) 109,430,468 | 255,661,524 | (3) 104,493,567 | 235,345,600 | (4) 26,902,042 |
| 1891 | 611,780,000 | (2) 164,000,000 | 181,789,628 | (3) 105,966,978 | 255,434,667 | (4) 60,149,994 |

(1) From July 1st to June 30th. (2) From July 1, 1891, to March 1, 1892. (3) From January 1st to December 1st. (4) From April 1st to March 26th.

While it is quite evident that America's
contribution is large, it is equally apparent
that she meets sharp competition in
Russia and India. Wheat at seventy-ninecents per bushel was confidently expected
and has been realized by those who have
watched the antics of our American
farmers. There are many influences at
work to operate against advanced prices
generally, but none has been more potent
in accomplishing this very undesirable
condition than the judgment of the
average planter. According to the statis-
tician's report, of the department of agri-
culture, there were remaining in the
farmers' hands, on March 1, 1892,
171,000,000 bushels of wheat. Consump-
tion by the whole population averages,
approximately, 25,000,000 bushels per
month, and of this amount 11,000,000 (on
the basis of the average rate of consump-
tion per capita) are consumed in localities
where grown. Practically, the urban
demand has been met, and out of the
stocks now in the farmers' hands but a
small proportion will be sold. One hun-
dred and five million bushels is a con-
servative estimate of the amount that
will remain on hand to swell the crop
of 1892 out of all proportion to what will
actually be needed. What will be the
result? Another year of low prices and
consequent necessity of having the farm
mortgage renewed. The agricultural
methods employed in oriental wheat-
producing countries, especially India,
prevent dangerous competition at present;
but it must not be lost sight of that with
experience comes improved methods,
consequently larger production and the
capability of supplying larger demands.
While improved machinery would slight-
ly increase the cost of production, it
would not effect the price sufficiently to
preclude the possibility of greatly under-
selling the American product.The following statement shows the ex-
port value of wheat from 1851 to 1889:*

| YEARS. | AVERAGE EXPORT VALUE. | | | | |
|--------|-----------------------|---------------|----------|-------------|-----------------|
| | RUSSIA. | | INDIA.† | | UNITED STATES.‡ |
| | Per chetvert. | Per bushel. | Per cwt. | Per bushel. | Per bushel. |
| 1851 | Rubles. 5.01 | Dollars. .651 | ..... | ..... | .95 |
| 1852 | 4.92 | .639 | ..... | ..... | 1.12 |
| 1853 | 5.80 | .754 | ..... | ..... | 1.55 |
| 1854 | 7.04 | .915 | ..... | ..... | 1.66 |
| 1855 | 8.32 | 1.010 | ..... | ..... | 1.85 |
| 1856 | 9.36 | 1.195 | ..... | ..... | 1.53 |
| 1857 | 10.00 | 1.247 | ..... | ..... | 1.02 |
| 1858 | 7.93 | .962 | ..... | ..... | .95 |
| 1859 | 8.52 | 1.009 | ..... | ..... | .98 |
| 1860 | 8.96 | 1.080 | ..... | ..... | 1.23 |
| 1861 | 8.79 | .997 | ..... | ..... | 1.13 |
| 1862 | 8.28 | .970 | 3.06 | .76 | .96 |
| 1863 | 7.34 | .905 | 2.82 | .70 | .88 |
| 1864 | 7.18 | .779 | 4.26 | 1.05 | .97 |
| 1865 | 7.10 | .753 | 3.79 | .93 | 1.11 |
| 1866 | 7.10 | .792 | ..... | ..... | 1.16 |
| 1867 | 7.10 | .780 | 3.38 | .83 | 1.49 |
| 1868 | 7.10 | .777 | 3.59 | .88 | 1.11 |
| 1869 | 10.00 | 1.032 | 4.21 | 1.03 | 1.09 |
| 1870 | 10.00 | 1.005 | 4.18 | 1.02 | .94 |
| 1871 | 10.00 | 1.084 | 3.70 | .91 | 1.33 |
| 1872 | 10.15 | 1.120 | 4.26 | 1.03 | 1.20 |
| 1873 | 11.56 | 1.262 | 4.71 | 1.12 | 1.30 |
| 1874 | 10.57 | 1.195 | 4.58 | 1.07 | 1.03 |
| 1875 | 10.42 | 1.166 | 3.61 | .82 | 1.12 |
| 1876 | 11.02 | 1.159 | 3.50 | .76 | 1.12 |
| 1877 | 12.06 | 1.057 | 4.51 | .99 | 1.31 |
| 1878 | 11.84 | .980 | 4.92 | 1.02 | 1.07 |
| 1879 | 13.34 | 1.094 | 5.11 | 1.07 | 1.24 |
| 1880 | 14.51 | 1.233 | 4.40 | .93 | 1.11 |
| 1881 | 14.50 | 1.239 | 4.33 | .90 | 1.19 |
| 1882 | 12.98 | 1.063 | 4.29 | .89 | 1.13 |
| 1883 | 12.10 | .972 | 4.24 | .87 | 1.07 |
| 1884 | 11.43 | .938 | 3.98 | .81 | .86 |
| 1885 | 9.39 | .774 | 3.80 | .74 | .87 |
| 1886 | 10.47 | .802 | 3.87 | .71 | .89 |
| 1887 | 10.72 | .778 | 4.11 | .73 | .85 |
| 1888 | 10.41 | .780 | 4.27 | .73 | .90 |
| 1889 | 10.13 | .887 | 4.20 | .73 | .83 |

*Statistician's report of the department of
agriculture, March, 1891.†Fiscal years beginning May 1st down to
1866, inclusive, and from 1867, years beginning
April 1st.

‡Years beginning July 1st.

§As there are no statistics of quantity for
the eleven months ended March 31, 1867, the
average export value for this period cannot be
given.It will be observed upon examination
of the foregoing table that in but three
out of twenty-seven years was the export
value of American wheat less than that of
India, and in but twelve out of thirty-
nine years less than that of Russia. This
is caused, practically, by cheap labor and
methods of production in which we cannot
compete. Our life is on so high a planeagricultural implements, under the
present narrow range of production,
constitute an element of weakness in-
stead of strength. Less physical exertion
is necessary (seemingly less mental ex-
ertion employed) now than was required
thirty, or even twenty years ago. Greater
ease in producing our crops has not been
accompanied with greater diversity, and
from this cause has the effect of over-
production and depressed prices sprung.In connection with a growing surplus
and a shrinkage of values, it will be of
interest to present figures showing the
percentage of agricultural products to our
total import trade.*

| YEARS. | IMPORTS. | | |
|--------|----------------|---------------------|----------|
| | Total value. | Agricultural Value. | Percent. |
| 1850 | \$ 173,509,526 | \$ 44,493,656 | 25.6 |
| 1851 | 210,771,429 | 57,007,170 | 27.3 |
| 1852 | 207,440,398 | 59,274,185 | 28.6 |
| 1853 | 263,777,265 | 67,195,100 | 25.5 |
| 1854 | 297,623,039 | 68,155,997 | 22.9 |
| 1855 | 257,808,708 | 73,133,754 | 28.4 |
| 1856 | 310,432,310 | 83,988,473 | 27.1 |
| 1857 | 348,428,342 | 113,766,898 | 32.7 |
| 1858 | 263,338,654 | 89,198,856 | 33.9 |
| 1859 | 331,333,341 | 109,691,708 | 33.1 |
| 1860 | 353,616,119 | 108,013,711 | 30.5 |
| 1861 | 289,310,542 | 106,914,710 | 37 |
| 1862 | 189,356,677 | 89,389,911 | 47.2 |
| 1863 | 243,335,815 | 98,588,082 | 40.5 |
| 1864 | 316,447,283 | 135,209,621 | 42.7 |
| 1865 | 238,745,580 | 112,754,985 | 47.2 |
| 1866 | 434,812,066 | 161,656,716 | 37.2 |
| 1867 | 395,761,096 | 138,204,361 | 34.9 |
| 1868 | 357,436,440 | 154,106,493 | 43.1 |
| 1869 | 417,506,379 | 181,930,898 | 43.6 |
| 1870 | 435,958,408 | 188,260,363 | 43.2 |
| 1871 | 520,223,684 | 218,728,722 | 42 |
| 1872 | 626,595,077 | 268,539,732 | 42.9 |
| 1873 | 642,136,210 | 272,188,746 | 42.4 |
| 1874 | 567,406,342 | 266,181,348 | 46.9 |
| 1875 | 533,005,436 | 256,411,362 | 48.1 |
| 1876 | 460,741,190 | 228,285,819 | 49.5 |
| 1877 | 451,323,126 | 241,479,646 | 53.5 |
| 1878 | 437,051,532 | 219,704,164 | 50.3 |
| 1879 | 445,777,775 | 218,034,300 | 48.9 |
| 1880 | 667,954,746 | 308,682,837 | 46.2 |
| 1881 | 642,664,628 | 380,051,459 | 59.3 |
| 1882 | 724,639,574 | 323,109,120 | 44.6 |
| 1883 | 723,180,914 | 319,137,929 | 44.1 |
| 1884 | 667,697,693 | 307,846,312 | 46.1 |
| 1885 | 577,527,329 | 278,729,800 | 48.3 |
| 1886 | 635,436,136 | 297,424,209 | 46.3 |
| 1887 | 692,319,768 | 312,172,024 | 45.1 |
| 1888 | 723,957,114 | 328,879,614 | 45.4 |
| 1889 | 745,131,652 | 356,133,060 | 47.8 |
| 1890 | 789,310,409 | 374,191,442 | 47.4 |

*Statistician's report of the department of
agriculture, March, 1891.It is seen that while our total import
trade has increased 475 per cent since 1850,
the value of the agricultural products im-
ported has increased from 44 millions in
round numbers to 374 million dollars, or
830 per cent. In searching for the causes
of the depressed condition of farm values,
the home demand for foreign-grown
products must not be overlooked. Of the
374 million dollars of agricultural imports
in 1890, 55 per cent were tea, coffee, sugar
and molasses, and most of the balance of
the commodities so imported were pro-
duced at home, but bought abroad. We
import beans, peas, potatoes, and in fact,
all kinds of vegetables to a surprising
extent; yet we increase our production of
corn, wheat, oats and cotton, of which we
have already a surplus; we import butter,
milk, cheese, hides, goatskins and raw
wool to the extent of millions of dollars,
while our pasture lands are occupied by
produce upon which small profit is
realized. Farmers' sons not only inherit
the land, but the faulty methods of crop
rotation. They keep up the same routine,
year after year, that was followed by their
fathers—rarely making experiments in
new lines of production, and seldom
changing the aggregate or individual
areas devoted to crops of principal pro-
duction. This stereotyped mode of
agriculture has created a surplus of some
commodities and a deficiency of others.
In both instances the effect is felt directly
by the American farmer—the surplus de-
presses the price, and the deficiency com-
pels the consumer to seek foreign mar-
kets.The only salvation for the wheat
grower is to restrict production to what is
actually needed, and this probably would
be more easily accomplished, certainly
more uniformly complied with, by each
wheat-producing state enacting laws em-
bodying the principle of the Arkansas
cotton law of 1862, which prohibited
planters cultivating more than two acres
to each hand. The result was that all de-
mands for consumption were as easily
met as when ten acres to the hand were
cultivated, and owing to the limited area
under cultivation, it was possible to
bestow more attention on the plant, which
resulted in producing a better grade of
cotton and the realization of greatly in-
creased profits.In conclusion, let me say that produc-
tion must proceed upon this principle
before prices will have a permanent ten-
dency upward.

E. M. THOMAN.

SUGGESTIONS FROM STATION BULLETINS.

BY T. GREINER.

MANGELS AND SUGAR-BEETS FOR STOCK.
—It is true that the silo and its product,
corn sauer-kraut has on large farms largely
supplanted the culture of root crops for
stock-feeding. Still, mangels and carrots,
etc., have yet a place, and it seems to me
an important one. For people who keep
a cow or two and a horse or two, mangels,
sugar-beets and carrots are convenient
things to have, and a pretty good quantity
can be used to good advantage. Sheep,
poultry and hogs will also take their
shares during the long winter months.
And what an immense amount can be
grown on a small area of good land
properly enriched and cultivated.The Ohio experiment station has been
making a number of experiments in
growing and utilizing mangels and sugar-
beets, and gives an interesting report in
Bulletin No. 2, of Volume V, Second
Series."Land," says the bulletin, "which will
produce a crop of potatoes, corn or wheat,
will, with proper cultivation, grow a fair
crop of mangels or sugar-beets. The
deeper the soil the better; and if it is not
possible to plow eight or ten inches deep,
then it should be subsoiled. A clover sod
furnishes the best possible preparation as
a preceding crop. The land should be
thoroughly plowed during the winter or
early spring, and the further preparation
should be not merely passable, but good,
stirring, harrowing, rolling until the
ground is mellow and free from clods."The marking should be done with a
sled, making no furrow, but simply a
mark that may be followed with a hand-
drill, or possibly dropping by hand. An
allowance of from five to six pounds per
acre will not be too much if a drill is used.
The seed should be soaked in water two
or three days before planting. This will
hasten the growth, giving the young
plants a better start before the weather
becomes dry. Planting a seed every four
inches will not be too thick, as they will
have to be thinned out later in the season,
leaving one plant to every eight, ten or
twelve inches, depending somewhat on
kind. The seed should not be covered
more than an inch deep, and should be
planted just as soon after the ground is
fitted as possible, so that the roots may
have a fair chance with the weeds."More labor will be required during the
first three weeks after the mangels appear
above ground than during all the rest of
the season. More or less weed-pulling
and hand-hoeing will be required; but if
thoroughly done, the later cultivation
may be done with Breed's weeder, and
with a cultivator having narrow teeth.
Level cultivation is recommended. When
the leaves cover the ground fairly well,
cultivation may be suspended."The first operation in harvesting, on the
approach of freezing weather, is to cut off
the leaves and stems down near the base,
which can be done most rapidly with a
corn-cutter. The top is followed by a
man with a cart or a wagon, into which
the roots are thrown as rapidly as they
can be drawn out of the ground by hand.
With the Long Red class of mangels, the
pulling can be done very rapidly, but the
Ovoid and Globe classes often require
some plowing on either side of each row
to loosen them from the soil."In tests made at the station, the Giant
Long Red has given a more satisfactory
average growth than any other one of that
class—the Long Red. The Giant Holstein,
Dignity and Jumbo have all made occa-
sional higher yields than the Giant Long
Red and are among the best sorts in that
class. The Giant Yellow Intermediate,
Yellow Ovoid and Yellow Leviathan are
among the better kinds in the Ovoid class.
The Globe class, as a whole, has been the
least valuable type of mangels."An acre of sugar-beets, properly grown,
has proved decidedly more valuable for
feeding stock than an acre of mangels.
The sugar-beets grown at the station the
past year, however, have shown a per-
centage of sugar too small to justify
growing them for sugar-making purposes.
Transplanting mangels has not been at-
tended with satisfactory results, except
in filling up rows to make a more perfect
stand. Cutting off the leaves when trans-
planting has not been of benefit. Ma-
nuring land with fresh barn-yard manure
has been detrimental to the growing of
mangels, and has in every case decreased

the yield. Preserving the leaves in the silo with corn-fodder has not been found practicable. On account of the large proportion of fertilizing elements in the leaves, it is advisable to leave them upon the ground."

SWEET POTATO GROWING.—The subject is timely, for the beginning of June is just the time that we in the more northern states must plant our "slips" in open ground. Before me is Bulletin No. 13 (second series), of the Louisiana State Experiment Station, treating on sweet potatoes. The station's advice is good.

"Sweet potatoes," says the bulletin, "require for their best development a loose, fine, sandy loam, fairly fertile, particularly so in phosphoric acid and potash. An excess of nitrogenous matter frequently causes an inordinate development of vines at the expense of roots; hence, excessive quantities of ammoniacal manures are to be avoided in the growing of this crop. Acid phosphate, in these experiments, has given the largest yield."

"That cotton-seed meal will produce unshapely potatoes was apparent at a glance. Every experiment with this fertilizer gave potatoes with long projections at each end."

"To judge from a single test with one variety, it would seem that at least fifteen inches should be given between each two slips for maximum results. The following varieties have the most ready sale in Louisiana immediately after digging: Georgia and Sugar. The most desirable mealy varieties are: Southern Queen, New Jersey, Barbadoes, Spanish Yam, probably Norton and Dog River. Varieties to be grown as food for stock are: Red Nansensmond, Pumpkin and California. The Vineless is promising, but requires further trial."

What I do miss in the bulletin, however, is a description of best methods to keep the roots over winter for seed purposes. This is information that is frequently asked for by readers of agricultural papers. In this matter we yet meet much difference of opinion. What we want to know is the exact temperature in which sweet potatoes will remain in best state of preservation, and best retain their vitality. I hope that the Louisiana and other southern stations will experiment in this direction, and tell us all about it.

TOBACCO GROWING.—The Alabama station issues a bulletin (No. 37) on "Tobacco." I quote this paragraph from it:

"The tariff of two dollars a pound, recently placed on foreign tobacco, is having a favorable influence on this industry, and should induce land-owners who find many other crops unprofitable, to give the tobacco crop a trial."

I am sorry to see any such encouragement given to the tobacco industry. Tobacco is a good enough insecticide, but what is needed for this purpose can easily be grown in any home garden. No especial skill is required, nor much advice by stations. But the commercial production of the vile weed is a curse to the country. It is the most exhaustive crop that the farmer can grow. It takes the very life right out of the soil, and tobacco culture has ruined, almost beyond redemption, millions of acres of beautiful and fertile soil in the South. At the same time it has destroyed people's nerves and caused mischief in more than one direction.

"Land owners who find many other crops unprofitable should give the tobacco crop a trial." Not much. If other crops are not profitable, it shows that soil fertility and manure are lacking. Tobacco will make a bad matter worse. Have pity on your soils, as well as on the human race. Let tobacco alone. My preference would be not only for an increase of the tariff on tobacco, but for placing a pretty stiff internal revenue tax on the domestic tobacco product.

GRUBBING AND CLEARING.

Born and raised in a heavily wooded country, I have all my life had more or less to do with clearing land of trees and stumps, and have seen many devices for ridding the ground of its primeval growths. The old-time practice of working among the stumps and girdled trees until decay removed them, are now obsolete, as land is too valuable and machinery too delicate to warrant such practices.

I find it the most profitable to remove all small trees by grubbing, and the Mich-

igan rule as to size is a pretty good one to follow. In that state there is a great deal of grubbing let by the acre, at from ten to fifteen dollars per acre, and the rule is to grub all trees that a man can span at two feet above the ground. This, it will be seen, includes trees of four inches in diameter and less. An active man will make about \$2 per day at the prices I have mentioned.

Above four inches in diameter, I find the cost of grubbing rapidly increases. For example, the cost of grubbing a dog-wood-tree seven inches in diameter, is three or four times as great as one half that size.

Trees with tap-roots, hickories, burr, swamp and white oak are much harder to grub than those without the center root. The root of a shell-bark or pig-hickory is like a carrot, and larger than the tree above ground. The rule is that such roots shall be cut six inches below the surface. Some kinds of trees can be profitably grubbed up to seven or eight inches in diameter. Among these are red elm, chestnut, white ash, whitewood, cucumber and ironwood. In considering the question as to how much time one can afford to spend in removing a stump or tree, its lasting qualities must be taken into account. Sassafras stumps on my place, cut thirty years ago, appear as sound as ever, and large burr oak and chestnut stumps do not decay much in the first thirty years of their existence.

Where it is the intention to make a thorough and complete job of reducing a forest to plow land, it is best to grub the trees before chopping, as the tops assist in the work. If the land is for ordinary agricultural purposes, it will hardly pay to make a complete removal the first year. It is better to grub the smaller trees, being governed as to size by the variety, and then saw down the larger ones as near the ground as possible. A low stump that the whiffletrees will pass over is much less in the way than one two or three feet high.

A sharp mattock and two axes are the tools for grubbing, and it will pay to spend half an hour every half day in grinding. The axe that is used to chop in the ground cannot be kept very sharp, but it will work much better if the edge is kept in a general line; that is, nicks or battered places that turn the edge in different directions, should be ground off. The grubbing-axe and mattock should not be too highly tempered, or they will break against stones.

After grubbing the smaller trees and sawing the larger ones, the ground should be immediately put into some hoed crop and given clean cultivation. By this course many roots will be cut and broken and can be removed, while those remaining will decay much quicker than if the ground was not cultivated. All sprouts should be removed while soft and green, or three or four times during the summer. If cultivation is continued for three years, and all sprouts kept off, not much will remain of the smaller and most perishable stumps, and the field will present a subdued and civilized appearance, quite different from that of a field left to itself to grow up to briars and sprouts.

The removal of large or sound stumps is attended with a large amount of labor, but it can be lightened some by making an all-summer's job of it and calling in some of nature's forces to help.

There are many powerful stump-extractors made, but there are two objections to all of them; one is high price; the other that they leave a large hole in the ground, and the entire stump, loaded with the adhering earth, is unwieldy, and for a time, at least, an elephant on the farmer's hands. I find dynamite, fire and a horse-lever the simplest and cheapest means of doing the work. Beginning when the ground is soft in the spring, I pull with chain and team such stumps as can be pulled in that way, and cleaning off all adhering earth, leave them in a position to dry.

Next, I attack with a horse-lever such stumps as have a hollow center or are sufficiently rotten to warrant it; these are pulled to pieces piece-meal, and left to dry.

After I have accomplished all I can with a lever, I resort to dynamite. Heretofore I have always used No. 2 Hercules powder; but this year I have used Judson powder of 50 per cent strength, and find

it more effective than the other, the cost being the same. My soil is light and sandy, and I find that I do not get very much to show for my work when I place the powder underneath a green oak or chestnut stump. It generally blows out a big hole without shattering the stump to any great extent, so lately I have got in the way of boring a hole in the stump close to the ground and inserting a cartridge therein.

I chop away the buttress of one or more roots and bore in, with a slightly downward inclination, the length of the auger, which is fifteen inches. The size of the cartridge is one and one quarter inches, and the auger is one and three eighths, making a nice fit. I find that with a fifteen-inch hole, five inches of cartridge does about as much execution as a whole one, a longer cartridge coming too near the outside, and leaving too little space for a tamping. For large stumps it would be better to have an auger eighteen or twenty inches long, but such a tool cannot be procured at ordinary hardware stores.

In loading the blast, I first cut the end of the fuse square, and insert in the cap, crimping the cap onto fuse with a pair of pincers or my teeth—the former is the safest. Then I open the cartridge at one end, and make a hole with a stick or lead-pencil, in which I insert the cap, and wrapping the projecting paper around



FIG. 1.

the fuse, tie it tightly with a strong cord. This holds fuse and cartridge together, and after cutting off what I do not need from the other end, the cartridge is carefully pushed to the bottom of the hole, using care not to separate cartridge and fuse. I might remark that the pieces cut off are not wasted, but are used in connection with other pieces for other blasts, their efficiency not being impaired in the least by being cut up.

For tamping, I use fine, bituminous coal, called slack, it being the best material I know of. It should be slightly wet, and does not have to be pounded into the hole, like brick-dust or clay. I use a three-quarter-inch iron bolt for tamping, the head making a place to take hold of, and I simply force the coal-dust into its place with a twist of the iron, mashing it into a solid plug that never blows out. I am indebted to a coal miner for the idea, and it is worth a good deal to have a tamping material so easily used, for the tamping of a blast where percussion caps are used is really a dangerous operation if it has to be pounded in.

When the tamping is completed, I cut off the fuse so as to leave about fifteen inches attached to the cap. This is sufficient to permit an active man to run twenty rods if he chooses. I carry my powder, fuse and tools in a half-bushel market basket, and when the blast is in, remove them a distance of two or three rods. Dynamite and its near relations are perfectly harmless if kept away from the percussion caps that explode them, so I never carry the caps with the powder, but keep them carefully in a vest pocket, away from matches, nails, or anything that would explode them.

When all is ready, I strike a match and light a fuse, and this is the time when one does not want to get excited or take anything for granted. I turn the end of the fuse down and apply a lighted match, and when the fuse burns with a whirring noise, then I start to run. I used to consider twelve rods a safe distance; but the other day I put half a cartridge into a little, dry chestnut stump, and turned to see it go off at a distance of fourteen rods. It sowed splinters over six acres of ground and sent a piece of wood the size of a brick whizzing by my ear and four rods beyond.

The placing of a blast in a green or sound stump just above the surface does not generally entirely remove it, but puts it in the way of being removed. It shatters the entire top, and blows away a portion of it even with the surface of the ground. It generally cracks the roots and often loosens the earth around them so that they can be extracted with the horse-lever; but if it does no more than blow the top of the stump off even with the

surface, it is a great step toward ridding the field of that obstruction. With the top gone, the crown of the roots shattered and the earth loosened, decay is hastened, and in two or three years the roots can be extracted with ease. In the meantime the plow and cultivator can be swung over it, and it offers no obstruction to either mower or binder.

This is on the supposition that we leave it in that shape; but this is not necessary.

In our operations we have accumulated a large amount of broken pieces of stumps and roots that are not yet disposed of, and we have still at our service one of nature's most destructive agents. If we dig away the earth from the roots of the already demoralized stumps, they will dry out very rapidly, and after corn planting, or better still, in August, many of these stools, if covered with the dry remnant, will nearly burn out, or burn enough so the separate roots can be readily taken out. All this requires very little outlay of heavy labor, and taking everything into account, is not expensive.

I have spoken of a horse-lever, and this should have a little consideration in connection with the subject in hand. Fig. 1 shows the hook and chain which makes the lever available. The hook is of wrought iron, and at *a* is two and three fourths inches thick and three inches broad at the widest place in the center of the hook. It is seventeen inches from the outside of the hook at *a* to the center of the eye. The shank is about two inches in diameter, with the corners beveled. The links are of one and one fourth inch round iron, and measure seven and one half inches from outside to outside. The large loop is of one and one half inch round iron, and eleven inches in diameter inside. The whole is four feet long, and must weigh 60 or 70 pounds.

It is not a very delicate little tool, and one can leave it in the field and no tramp will carry it off to wear on his watch-chain or trade for a glass of beer. The lever is a stick of green bitter hickory, ten and one half inches in diameter at the butt, eight at the tip and twenty-one feet long. In use the butt is drawn up to a stump, the large ring slipped back onto it about thirty inches, and the hook hooked over a stout root. The team is attached to the small end of the lever with an ordinary chain, and driven in a circle. With a good team, the strain is enormous, and in practice, the hook and chain, large as they are, prove none too big. It was hired from a friend, so do not ask me who built it or what it cost.

In conclusion, it takes lots of time, patience, philosophy and work to clear a field of stumps if the timber is heavy. The motto of a large stump is, "United I stand, divided I fall," and if you can do no more at first than to crack it in different directions, its doom is sealed. Frost and rain, sun and wind get in their work, and in two or three years it falls an easy prey to fire in a dry time, or the application of the simplest mechanical devices in a wet one.

L. B. PIERCE.

Summit county, Ohio.



Mrs. Annie W. Jordan

Of 165 Tremont St., Boston, was in very poor health, from bad circulation of the blood, having rush of blood to the head, numb spells, and chills, and the physicians said the veins were almost bursting all over her body. A collision with a double runner brought on neuralgia of the liver, causing great suffering. She could not take the doctor's medicine, so took

Hood's Sarsaparilla

and soon fully recovered, and now enjoys perfect health. She says she could praise Hood's Sarsaparilla all day and then not say enough.

HOOD'S PILLS are hand made, and are perfect in composition, proportion and appearance.

Our Farm.

PEANUT CULTIVATION.
THE USES OF THE PEANUT.

[Concluded.]

The present uses of this valuable nut are varied, but not to such an extent that its commercial possibilities have been fully developed. The following general outline affords but a slight indication of its economic value:

The commercial supply abroad is furnished, almost exclusively, by the French and Portuguese colonies on the western coast of Africa. Marseilles is the largest market in the world—handling from fifty to sixty thousand tons, bulled, each year. Norfolk, Virginia, is the Marseilles of America. This market annually receives from one million five hundred thousand (1,500,000) to two million (2,000,000) bushels.

The flavor of the foreign-grown nuts limits their use to manufacturing purposes—the oil entering extensively into the manufacture of soap. The adulteration of salad-oils with peanut-oil is a common and profitable practice, as is, also, the adulteration of coffee and chocolate with the nut.

With the production of so valuable an oil-nut it is possible for us to discontinue our large importation of salad-oils and produce our own, with greatly reduced cost to the consumer.

During the fiscal year ending June 30, 1891, we imported 605,000 gallons of olive (salad) oil, at a cost of \$1.20 per gallon—making the aggregate value seven hundred and thirty-three thousand dollars.

One bushel of peanuts will produce, under cold pressure, one gallon of oil. The cost of producing the nuts is forty cents per bushel, including labor; add to this the cost of having the oil expressed, and allowing for a liberal profit to the producer and retailer, we could place on our tables an oil for forty cents less per gallon, which equals in every respect the olive-peanut oil that we now consume. It is an absurdity that we should waste thousands of dollars in importing an oil that is so largely adulterated with American products—I mean cotton-seed and peanut oils. The cotton-seed oil outrage that the American consumer has allowed to be imposed upon him is too familiar to all to need any rehearsing. Let it suffice to say that we export our cotton-seed oil at thirty-six cents per gallon, and then import one third of it in the form of adulterated oils, at the average value of \$1.06 per gallon. The enormity of this evil is none the less, because it is indulged in a smaller degree, as regards peanut-oil.

Conclusive evidence is found in every line of economic investigation that we are not fully aware of our commercial capabilities, and have only to a limited extent developed the multiplicity of resources within our borders.

Peanut-oil in the South has partly supplanted the cheaper grades of lubricating oil, and in the North, along the Atlantic coast, it is used frequently instead of cotton-seed oil in packing sardines.

There is no nut so universally consumed as the peanut. In traversing the streets of our cities we have conclusive evidence furnished by the thousands of vendors, who, seemingly, eke out a very comfortable existence by their sale, and also in thousands of shop windows, where they are accorded the most advantageous places for display. This demand alone insures to the producer ready sale and large profits, but should other uses for the oil be discovered, which does not seem at all unlikely, the present product would be insufficient to meet the demand, and better prices would rule in consequence.

Nothing is wasted in the cultivation of this crop. The nuts that have escaped the vigilance of the gatherers fatten the swine more readily and cheaply than any other food; the vine, if gathered at the proper time, makes good hay, and the nut has many valuable uses.

In view of the above facts, and in consideration that few crops now being cultivated approach it in cash value per acre, it would seem that sufficient reason exists for its extended cultivation.

E. M. THOMAS.

Farm and Fireside Directory

OF

FARM IMPLEMENTS, MACHINERY, ETC.

This Directory will be found very useful to those who want any kind of farm implements, machinery or vehicles, and our readers will find it to their interest to write to the firms named for catalogues and information before deciding what to buy.

Always mention the Directory when writing to those whose names appear in it, for Farm and Fireside subscribers will secure special attention from them.

We aim to give in this Directory the addresses of reliable manufacturers and dealers in articles that are wanted by farmers and country people. All of these firms are well known to us, and we do business with many of them. So great is our confidence in them that we guarantee to return to our subscribers any money that may be lost by trusting any one whose name appears in this Directory, who turns out to be a deliberate swindler.

This offer is to actual subscribers only, and is a positive guarantee to make good any loss occasioned by swindlers.

BARB WIRE.

Kelly Barb Wire Co., Chicago, Ill.
Buck Thorn Fence Co., Trenton, N. J.

BINDERS, REAPERS AND MOWERS.

William Deering & Co., Chicago, Ill.
Johnston Harvester Co., Batavia, N. Y.

BUGGIES AND CARRIAGES.

Studebaker Bros. Mfg. Co., South Bend, Ind.

CORN PLANTERS.

Keystone Mfg. Co., Sterling, Ill.

COTTON GINS.

Kingsland & Douglas Mfg. Co., St. Louis, Missouri.
Daniel Pratt Gin Co., Prattville, Ala.
New Orleans Machinery Co., Ltd., New Orleans, La.

CREAMERY, BUTTER, CHEESE, DAIRY MACHINERY, SEPARATORS, Etc.

Flint Cabinet Creamery Co., Flint, Mich.
D. H. Burrell & Co., Little Falls, N. Y.
Davis & Rankin Bld'g and Manuf'g Co., Chicago, Ill.
Vermont Farm Machine Co., Bellows Falls, Vt.

CULTIVATORS.

The Long & Allstatter Co., Hamilton, Ohio.

ENGINES.

Armstrong Bros., Springfield, Ohio.
The Huber Manufacturing Co., Marion, Ohio.
Wood, Taber & Morse, Eaton, N. Y.

EVAPORATORS.

Blymyer Iron Works Co., Cincinnati, Ohio.

EVAPORATORS FOR MAPLE AND SORGHUM.

The G. H. Grimm Mfg. Co., Rutland, Vt., & Hudson, O.

FARM WAGONS.

South Bend Wagon Co., South Bend, Indiana.

FEED CUTTERS.

Whitman Agricultural Co., St. Louis, Mo.

FENCE MACHINES.

Richmond Check Rower Co., Richmond, Ind.
Lansing Wheelbarrow Co., Lansing, Mich.

FERTILIZERS.

Baugh & Sons Co., Philadelphia, Pa.

GARDEN IMPLEMENTS.

S. L. Allen & Co., Philadelphia, Pa.

GRAIN DRILLS, Etc.

Bickford & Huffman, Macedon, N. Y.

HARNESS.

Elkhart Carriage and Harness Co., Elkhart, Ind.

GENTLE BEES.

Certainly there are gentle bees and bees not gentle—bees that may be handled without gloves or veil without making a hostile movement, and bees that will sting and fight at the slightest provocation, or without any.

There is no reason why the beekeeper should not give attention to the strain of his bees—why he should not breed to produce gentle bees. Here is a colony of bees, Italians, known and feared in the apiary for their ugly disposition. They are quarrelsome and sting when there appears to be no occasion. The colony casts a swarm, and the young bees as they begin to appear show the characteristics of the old ones. They are "peppery," "touchy" and have to be let alone.

The bee-keeper with such a colony can endure them no longer. Their ugliness is due to the queen, and he kills the old queen and the new and introduces new ones. After the old bees in both colonies have lived out their time, there is no more stinging; yes, there may be stinging, but the bees with the ugly disposition have gone and a gentler race is in its place.

There is no need of keeping ugly bees. Change the queen immediately, that the ugly bees may disappear as soon as possible. It pays to get good queens—something better than dollar queens, although it must be said that a dollar queen may prove to be as good as a five-dollar queen, and if prolific and gentle, make her the mother of all the queens in the apiary. But her queen progeny should not be mated with her drone progeny, to prevent in-and-in breeding. Little may be known on this subject with reference to bees,

Gale Manufacturing Co., Albion, Mich.
Hench & Dromgold, York, Pa.
D. S. Morgan & Co., Brockport, N. Y.

HAY LOADERS.

The Farmers Friend Mfg. Co., Dayton, Ohio.

HAY RAKES.

P. P. Mast & Co., Springfield, Ohio.

HAY TOOLS AND MACHINERY.

Oborn Bros., Marion, Ohio.

HORSE POWERS.

C. Aultman & Co., Canton, Ohio.
S. S. Messenger, Tatamy, Pa.

IRON FENCING.

Hartman Manufacturing Co., Beaver Falls, Pa.

LAWN MOWERS.

Chadborn & Caldwell Mfg. Co., Newburgh, N. Y.

MANURE SPREADERS.

Kemp & Burpee, Syracuse, N. Y.

MOWERS.

Stoddard Manufacturing Co., Dayton, Ohio.

OIL, GAS AND WATER DRILLING MACHINERY.

The American Well Works, Aurora, Illinois.

PLOWS.

Oliver Chilled Plow Works, South Bend, Indiana.
The Bucher & Gibbs Plow Co., Canton, Ohio.
Princess Plow Co., Canton, Ohio.
Rock Island Plow Co., Rock Island, Ill.

POTATO DIGGERS.

Pruyn Potato Digger Co., Hoosick Falls, N. Y.

POTATO PLANTERS.

Aspinwall Manufacturing Co., Three Rivers, Mich.

ROAD MACHINES.

American Road Machine Co., Kennett Square, Pa.

ROOFING.

Kanneberg Roofing Co., Canton, Ohio.

SCALES.

Osgood & Thompson, Binghamton, N. Y.

SPRAYING MACHINES.

P. C. Lewis, Catskill, N. Y.

THRESHING MACHINERY.

The O. S. Kelly Co., Springfield, Ohio.
Minard Harder, Cobleskill, New York.
The Westinghouse Co., Schenectady, N. Y.

WELL DRILLING AND PUMPING MACHINERY AND TOOLS.

Novelty Iron Works, Dubuque, Iowa.
St. Louis Well Machine & Tool Co., St. Louis, Mo.
Williams Bros., Ithaca, N. Y.

WINDMILLS.

The Springfield Machine Co., Springfield, Ohio.
Perkins Wind Mill Co., Mishawaka, Indiana.
U. S. Wind Engine and Pump Co., Batavia, Ill.
Aermotor Co., Chicago, Ill.
Stover Manufacturing Co., Freeport, Ill.

WIRE FENCE.

Sedgwick Bros. Co., Richmond, Ind.

WOOD FORCE PUMPS.

C. G. Blatchly, Philadelphia, Pa.

but it may be supposed that the effect may be similar to that in other forms of life.

To avoid in-and-in breeding with absolute certainty is probably impossible, but if there be several original or first queens from different races instead of one in the apiary, then the queen progeny of one mother may meet the drone progeny of another queen mother.

GEO. APPLETON.

EXTRACTS FROM CORRESPONDENTS.

FROM NEW YORK.—Caroline is the next-door neighbor to Ithaca, and near enough to hear the "big whistle" that scuds out the weather signals. She is rich in farms, upon which are windmills and silos; and traction steam-engines are used for threshing. Portable saw-mills are doing a good business in the lumber line. Some dairies are using cream-separators and making butter which sells from 25 to 32 cents a pound. Hay sells at \$10 to \$12 per ton. Good cows are worth \$30. Spring was wet and cold. Farmers put in more oats than usual, and they say planted fewer potatoes than they did last year.

Caroline, N. Y.

S. A. V.

FROM COLORADO.—We came here in October, 1886, and took a homestead. I love my home very much. We have endured many hardships. We had good crops last year. Spring was never more favorable than this year. Small grain of all kind looks very promising. The climate here is unsurpassed for health. I would advise those who are looking for a home to come west. It is better by far than to be without a home and have to rent and be bossed by some one, or be at the beck and call of others. Persons coming here with a little money will do better than in the East, but I would say, come and see for yourselves. We have an abundance of pure spring water, and a profusion of flowers all through the spring, summer and autumn.

Wray, Yuma county, Col.

J. M.

FROM NEBRASKA.—Buffalo county is about the center of the state, east and west. Kearney, the county-seat, is known as the "Mid-

way City." It is a fine city, with a population of eight thousand, and is located on the north side of the Platte river; it has electric street-cars, seven banks, churches of all denominations, six large school-buildings, two daily and four weekly newspapers, and six large hotels. It has an oatmeal-mill which daily turns out seventy-five barrels of the finest oatmeal I ever saw. Her cotton-mill will soon be ready to begin work, the power being furnished by the Kearney canal. This canal furnishes our city with motor-power for her street railway. There is as fine a country surrounding Kearney as there is in the United States, and the soil will produce most things that a man wants to plant. Land is worth from \$10 to \$35 an acre. Last year wheat yielded 10 to 35 bushels, oats 60 to 90 bushels, corn 30 to 60 bushels per acre.

Kearney, Neb.

E. S. G.

FROM MINNESOTA.—Nicollet county occupies the angle formed by the great bend in the Minnesota river. The county is well adapted to diversified farming. It has enough timber for firewood; good water is abundant, though during the late dry years most farmers have put in tubular wells and windmills, water being found at a depth of about 150 feet. This county was opened up about thirty-five years ago, and is now thickly settled by an industrious class, composed largely of Germans, Scandinavians and their descendants. The soil is a rich, black loam, readily broken up and yielding abundant crops of all cereals common to this latitude. Wheat has been the great staple, though of late more attention has been given to flax, clover, millet, dairy products and hogs. There are plenty of farms for sale, the prices being from \$20 to \$30 per acre. We have good railroad facilities, good markets and a good school system. The farmers are mostly contented with their lot; we notice that those who leave here for other parts generally return if they can, and are much more contented when they get back. The climate is excellent. Crop failures are unknown. The one fault is the rather long, cold winter; but with good buildings for man and beast there need be no suffering. Last year we had a great yield of everything, and prices are fair; wheat is worth now 72 cents, corn and oats 30 cents, flax 85 cents per bushel; pork 4 cents and butter 18 to 20 cents per pound; eggs 12 cents per dozen. Horses are cheap, though there is always ready sale for heavy horses. Beef is cheap—too cheap; we cannot compete with the western producers of beef.

Nicollet, Minn.

N. A. D.

FROM MISSISSIPPI.—While the soil of some places in this region is not as fertile as could be wished, it is easily made highly productive by judicious management and the moderate use of easily-procured and inexpensive manures. It is friable and warm and easily worked. Three and four crops are raised from the same ground in a single year. A wide range of products are successfully cultivated. It is one of the finest regions in the world. There are specialties which yield great crops. It is interesting to the farmer and fruit-grower to study the peculiarities of climate, temperature, rainfall, isothermal conditions, character of prevailing winds and extremes of heat and cold. All of these exert an influence on plant growth, as everyone knows; nevertheless, too little attention is given to them by those most intimately concerned in their effects and influence of the products of the farm, orchard and garden. A study of these matters will hardly fail to bring a large amount of useful knowledge in determining the crops best adapted to particular localities, and the best management to get the most benefit in return for time, labor and money expended. Of the fruit products which grow to perfection here, the Scuppernon grape may become one of the most important and profitable. When one sees the perfection in which this vine grows here, how easily it is propagated and handled, both vine and fruit, its immunity from frost, fungi and insects, learns of its excellence as a fruit, and the quality of wine made from it, there is no little surprise that more attention is not given to it. It is time that there are small arbors in not a few places along the coast, but the wonder is that it has not ere this become a great local industry. The Scuppernon has long been known as the surest crop here of any known grape. A reliable and intelligent man, who resided on the coast over forty years, assures me the owner of a Scuppernon vine may reckon with safety every year upon a good crop of fruit. It does not require near as much labor and care as must be given to other varieties to insure success. The average yield of a three-year-old vine is one peck; at five years, two bushels; and a full-grown vine, or at ten years old, twenty-five bushels. This man has a Scuppernon arbor occupying less than one fourth of an acre, from which he makes five hundred gallons of unfermented wine a year, from the pure juice of the grape. His wine brings him \$2 per gallon. It never sells here at less than \$1 per gallon. Several persons who make Scuppernon wine on a small scale tell me that it is a natural sparkler. The cost of harvesting one hundred and twenty-five bushels is \$12.25. Five hundred and four gallons of wine were obtained here last season from that quantity of grapes. The Scuppernon, it is claimed, is proof against insects; grape-rot does not touch it. It seems to delight most, according to Hon. J. T. Henderson, commissioner of agriculture for Georgia, in the salt air of the sea-coast, and he adds: "This grape is *sui generis*; it bears transportation well, makes several distinct types of wine, all highly perfumed and of delicious bouquet, and a brandy of unequalled excellence. If we were restricted to a single vine, it is likely the Scuppernon would receive a larger vote for survivorship than any other single name in the catalogue of grapes." This is very high recommendation from an eminent source. It is reasonable to believe, as Mr. H. thinks, that in the not remote future an important and lucrative industry will grow out of the production of this very noted and striking type of the grape family.

Ocean Springs, Miss.

T. H. G.

Our Farm.

SEASONABLE GARDEN REMINDERS.

BY JOSEPH.

BUYING TOMATO-PLANTS.—About the time that this issue of FARM AND FIRESIDE is placed before the reader, the proper season for setting out tomato-plants has arrived. Fortunate are the home gardeners who have a few dozen well-grown, stocky plants of best varieties in their own frames or hotbeds, and can take them up with their roots firmly imbedded in a four-inch cube of soil, cut out of the plant bed or out of the flat, with a narrow spade. The *American Cultivator*, in a recent issue, says "it rarely pays those who grow only a few tomatoes for home use in the garden to go to the extra expense needed to secure early thrifty plants, as they can be bought from those who produce by the hundred thousand or million cheaper than any one can grow equally good in smaller quantity." The *Cultivator* is "way off." Really good plants, such plants as the home grower in northern locations must have if he desires to get the most satisfaction out of his tomato-plants, can seldom be bought, and then only at a high price. With us here, and in most localities of western New York, it is hardly worth while to set late, poor plants, as only a small part of the crop will come to maturity in average seasons. I always enjoy ripe tomatoes most in July and August, when the great majority of home growers around me have not yet seen a ripe specimen of fruit on their vines. I would have no chance to enjoy them thus early if I had to depend on buying my plants. For such a result, a combination of all the most favorable conditions is needed—selection of early varieties (Early Ruby, etc.), seed started early (not later than March 1st), early transplanting, with plenty of space between the plants, proper hardening of the plants by airing and exposure, taking them up with plenty of soil firmly adhering to the roots and setting in warm, rich soil as early as can be done without risk. Plants such as needed for this purpose we can easily grow, but rarely buy. Professional plant growers have to economize with labor and space. Still, if you must, for this season, buy your plants simply because you have neglected to raise them, be sure to get the best plants obtainable, even if you do have to pay a pretty good price. Buy plants in flats (boxes), with no less than three inches space between each two plants. When ready to plant, give the plants a pretty good watering, so that the soil is wet enough to stick together, but not muddy enough to run. Then separate the plants by perpendicular cuts with a knife, spade or trowel in the middle between each two rows of plants, both ways, and set them in their proper places, firming the soil well about the roots. Now, when you see the difficulty of obtaining just such plants as you want at reasonable cost, make up your mind not to be caught again in the future, but rather to raise your own plants. There is a great deal of pleasure and satisfaction in caring for some good plants, and of bringing them to the highest perfection.

VEGETABLES IN EUROPE AND AMERICA.—As a rule, the people of England and the European continent take more pains with their gardens than Americans do. Perhaps they have to. Nature is not nearly so generous with our trans-Atlantic brethren as with us; and thus it happens that with all their industry, their tables are less bountifully provided with the products of the garden and fruit patch than those of the average American. Mr. James J. H. Gregory, the famous Massachusetts seedsman, spoke of this in an address before a Boston farmers' meeting. "There are over forty varieties of beans, of corn and of tomatoes, fifteen varieties of squashes, fifteen or twenty varieties of cucumbers, and thirty-five or forty of melons," said he, "of which our English cousins know nothing as open-air crops. They have no maize; 'corn' there means small grain of any kind. They do not grow any squashes there worthy of the name, the vegetable marrow being their standard of excellence, and almost their only variety. Whoever has traveled in England knows the poverty of an English table. Go to the best

hotels, and you miss the delicious melons, sweet corn, beans, cucumbers and the great variety of other vegetables that are found on every man's table here, no matter how poor he may be. In fact, the poor man in this country lives like a king, and doesn't know it. There is no country in the world where tables are set so bountifully as in this."

We have two things that give us a great advantage over English gardens—a climate worth a thousand dollars per acre, and the ingenuity to raise good garden stuff with the least amount of hand labor. Good tools have elevated American gardening to the distinction of being a pleasure rather than a drudgery. And yet, even the average American does not make the most of his opportunities. With a little foresight, thought and skillful management he can have plenty of good vegetables for his table every day in the year. But you must keep on planting for succession. Don't think early spring is the only planting season of the year. As one crop is taken off, prepare the ground again with plow, cultivator, spade, hoe or rake, and then put another crop in without delay. In other words, always reload your gun after discharging it and bringing down your game.

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

BUDDING.

In its broad sense, the term grafting, or graftage, includes all there is to budding, for budding is simply grafting while the tree is growing. But as generally used, the term budding applies to the process by which a bud of the season is removed from its parent and is induced to grow upon some congenial stock. In the northern states it is a method commonly practiced to change the bearing of all stone fruits, quinces, apples and pears, all of which bud very easily. Many ornamental trees and plants are propagated by budding; as, for instance, some varieties of the elm, maple, poplar, birch, etc.

Budding is generally done on seedling stocks as near the ground as practicable, but it may be done on any growing part where the bark is not too hard and stiff to bend easily. It is often used to change the bearing of trees of medium size.

TIME FOR BUDDING.

In a general way, budding may be done at any time when the bark will peel and the buds sufficiently matured on the new wood. The proper time will be influenced by the kind of stock used, the season, and sometimes by attacks of insects and fun-

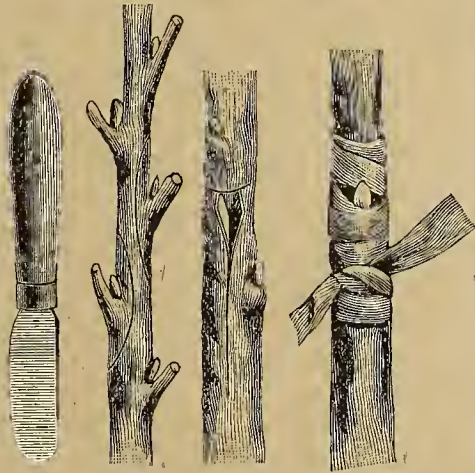


FIG. 1. FIG. 2. FIG. 3. FIG. 4.

gus diseases. For instance, the apple is generally best budded the latter part of August, but if the stocks are attacked by some insect or fungus disease that injures the foliage, the first of August growth of the stocks will be soon checked, and they must be budded at once or not at all. A period of drouth may check growth, and in a similar manner make early budding necessary. If considerable pruning is necessary to make a suitable place for the bud, it should be done at least two weeks before budding is commenced, for if heavily pruned at budding time, the shock to the stock is injurious, and may stop its growth and prevent the success of the operation. If the stocks are growing very fast, it is often best to delay the operation until the wood has become hardened.

NECESSARY IMPLEMENTS.

A common shoe-knife, with the point rounded off, as shown in Fig. 1, is a very cheap and yet a most excellent form of budding-knife. There are many kinds of knives designed for this purpose on the market, most of them with an ivory point

or blade for lifting the bark, but the rounded corner of the shoe-knife is just as good as the best ivory blade, for this purpose, and a shoe-knife costs only fifteen cents at the most, while commonly advertised budding-knives cost at least one dollar each.

Besides a knife, one must be equipped with tying material, and for this purpose bass matting is perhaps the best, but cotton warp is good, and if these materials are not at hand, woolen yarn will do fairly well. A tying material called raphia is largely used for this purpose, but I think it not so good as bass matting, though I often use much of it. The requisite in good tying material is that it shall not stretch or shrink when exposed to the weather.

HOW TO BUD.

The process of budding will be found illustrated in Figs. 2-5. The conditions of success are: 1. The stock and scion should be perfectly healthy and free from insects, and growing so that the bark will peel easily. 2. The buds must be well matured. 3. The knife must be sharp. 4. The work must be done rapidly. 5. The buds must be firmly and evenly bound into place. No wax is needed.

When everything is ready for the work, prepare a lot of bud-sticks, as shown in



Fig. 2, by cutting off all but one half inch of the leaf stock. They should be shoots of the season's growth that are not too succulent. The buds about midway the length of a shoot are generally the best. These bud-sticks should be carried in the field wrapped in moist cloth or oiled paper. If it is necessary to store them after they are cut, they should be kept in a cool place in moist moss or sawdust, but not in water.

To insert the bud, a smooth place should be selected (on the small stocks about two inches from the ground) on the north side, as buds are less injured by freezing on that side. A cross cut should be made at this point, and from it a longitudinal cut about one and a half inches long; at the same time the bark should be raised, as shown in Fig. 3. A bud-stick is then taken, and with the sharp knife a cut is made just through the bark about one half inch above the bud, taking out a thin piece of wood with the bark and bud, as shown in Fig. 4. For peaches, the whole bud need not exceed one half inch, while for apples, etc., the bud should be at least one inch long.

After the bud is cut off, the lower point is inserted under the bark at the cross cut, and gently pushed down by the leaf stock. If the bark will not raise when the bud is thus pushed down, the stock is not in the best condition for budding, and the bark may have to be raised a little with the knife-blade.

After the bud is in place, it should be wrapped firmly and evenly into place. One end of the tying material is held below the bud with the left hand, and the long end is wrapped, first upwards and then downwards, over the bud, as shown in Fig. 5, drawing it into place; the ends are then tied together below the bud. The bands should be watched, and when they draw too tight, loosened; when the bud is united, the bands should be removed altogether. The buds should remain dormant until the following spring, when the part of the stock above the bud should be cut off, and the bud thus forced into growth.

JUNE BUDDING.

Just now many nurserymen offer what they call June-budded trees at a low price. They are small trees, and can easily be sent through the mails. The operation for this mode of propagating is similar to common budding, except that the work is done some time in June, and the inserted buds are forced into growth at once after they adhere to the stock. The buds for this purpose may be hastened in maturing by pinching in the ends of the shoots to be used for bud-sticks. Nothing is gained by budding plants in June, for a plant budded in August will have made as large, if not larger growth in one year than a June-budded plant of the same season, and it will make a straighter tree.

INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

Manual for Nurserymen.—X. F. K., Antonio, Mo. Probably the best book for you to get as a manual for nursery work is "The American Fruit Culturist," by J. J. Thomas. Price \$2. It can be obtained of FARM AND FIRESIDE.

Grafting-wax.—S. F. N., Mt. Ayr, Iowa. One of the best grafting-waxes is made by melting together four parts, by weight, of resin, two parts beeswax and one part tallow. When all melted, pour into a pail of cold water, grease the hands and pull the wax the same as molasses candy is pulled until it is

white. If the wax is to be used in warm weather, use six parts resin, one part beeswax and one part tallow, which will make a very hard wax.

Inquiry.—We would like to hear from some of our subscribers who have had experience in making either apple butter or apple jelly for market, in answer to the following questions: (1) What is the best method and apparatus for making either jelly or butter? (2) What varieties of apples are best? (3) What is the best style of packages for marketing the product in? (4) What is the demand and price for either article? (5) What is the profit from the operation?

Brown Scale on Orange.—J. S. H., Walpole, N. H. The scale on your orange is probably the common brown scale of the greenhouses. My plan to rid orange and other greenhouse plants of them is as follows: Wash the plants with a strong soap-suds several times, and then with kerosene emulsion. The alkali in the soap seems to soften the shells so that the kerosene can penetrate and kill the pests. For recipe for making kerosene emulsion, see former issues of FARM AND FIRESIDE.

Strings on Root-grafts—Caroline Raspberries—Budding-knife.—J. R., Morristown, Ohio, writes: "Do the waxed strings on root-grafts need to be cut?—Is the Caroline raspberry propagated by tips or suckers?—What is a good budding-knife worth?"

REPLY:—There is no need of cutting strings on root-grafts, as the waxed string used is only cotton warp or some other soft string that is easily broken by the growing root. When cloth or paper is used for wrapping, the same holds true.—The Caroline raspberry is a suckering kind, and is very productive of suckers as well as fruit, but the fruit is quite soft and not fit to ship any distance. I have generally found trouble in marketing it even at a discount from the market price of red raspberries. However, I have often recommended the Caroline raspberry to persons who had not succeeded with other kinds in severe climates. It is very productive and hardy.—The regular budding-knife with ivory blade is worth about one dollar, but a very good budding-knife may be made by grinding off the corners of a small, square-pointed shoe-knife, leaving it round and smooth on the end, as will be illustrated shortly in these columns.

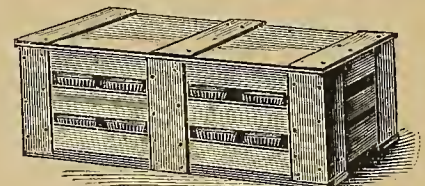
Even if you intend to buy your implements of your local dealer, it will pay you to send for catalogues of the first-class manufacturers named in our Directory on opposite page, as you can thus learn of the best that is made and be able to get it through your local dealer, otherwise he may sell you anything he has and you will not know whether you have the best or not.

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Our Fireside.

TIME FLIES.

It does indeed. It seems not long ago
That I, with sparkling eyes and sunny curls,
Laughed, danced and sung the merry hours away,
The happiest of happy little girls.

And well I mind the snowy winter morn,
What artless pride and earnest joy were mine,
When first I chose, after much careful thought,
For one I loved, a pretty valentine.

With fragrance of the rose 'twas sweet, and in
Each corner shone a tiny silver star.
And snowdrops pale and Maybuds pink enwreathed
The love-song that I wrote to—grandmamma.

This winter day another little girl,
With sparkling eyes and wavy, golden hair,
Sings, laughs and dances through the merry hours,
Unshadowed yet by sorrow or by care.

And she, too, sends a pretty valentine,
Decked with forget-me-nots and violets blue,
And holding graceful verses which begin
With kindly praise and end with "I love you."

And to my door it straightway comes. Ah, me,
How short, how very short life's season is.
Time flies indeed. The grandchild now is she,
And I, it follows, am the grandmamma.

—Harper's Bazar.

Mr. Van Twiller's Alibi.

THE snow had been falling for several minutes in little eddying gusts, and already an appreciable number of flakes were collecting on the cape of Miss Dorothy Dempsey's storm-coat, as she turned into Fifty-fourth street at a swiftness of pace. On her head, framed by a soft halo of a brown hair, in which the drops of moisture glistened here and there, a dark English walking-hat had slipped coquettishly to one side. Her cheeks were brilliant from the cutting wind, and her eyes shone with exhilaration as she battled against the storm.

To insignificant Bertie Carey, advancing from the opposite direction, she appeared like a delightful vision; a delight considerably influenced, of course, by the fact that she belonged to the right "set" of visions, or Bertie, being so little a man, would not have looked a second time. Indeed, it is doubtful whether anything short of Dorothy's genealogy on the maternal side would have induced him to give up his daily game of dominoes at the club and wheel about to join her promenade with such urbane oblivion to the coolness of his reception.

And it is not likely that at any other time Miss Dempsey would have resented his intrusion quite so hotly; but unfortunately for him, her memory still retained with vigor a graphic description, detailed to her only the previous evening by her Cousin Jack, during which, excited to unusual emphasis by Carey's last *faux pas*, he had gone so far as to declare him "a consummate ass, not fit for decent society." Dorothy, having agreed with him in spirit, if not to the letter, felt that she was justified in taking strong measures on this occasion.

To walk down the avenue in his company, at an hour when all her dear "Four Hundred" friends would be abroad and glancing curiously from their brougham windows or over their shoulders, was a reflection on her taste and discrimination which she was not ready to endure. Accordingly, before the preliminary greetings were fairly over, she was racking her brain for some way of dismissing him. In vain she meditated a dozen clever feminine maneuvers that, under any other circumstances or in any other locality, would have been practicable. It was Carey himself who finally provided her with the means of escape.

"Awfully jolly, this unexpected pleasure of a stroll with you," he murmured, ignoring the gait that was rapidly reducing him to breathlessness.

"Yes, indeed," returned Dorothy, with false sincerity, "only it can't be a very long one, as I intend making a call in this block." This with unblushing effrontery, although well aware that she could walk on to the North river without finding a name on her list.

"A mutual friend?" inquired Carey.

"I think not."

"This must be the house, then, since it is the last one."

"Thanks, yes. I suppose you will be at the Gray's. Good-afternoon."

"Oh, the Gray's!" cried Carey, fired to fresh recollection; "haven't you heard? Then, if I may, I will wait and see if your friend is in; if not, we can continue our chat."

Now, Miss Dorothy, being an independent and somewhat peremptory young lady, and having gone to all the trouble and risk of this subterfuge, was anything but pleased at a turn which left her unwittingly outwitted. But having gone so far, it was necessary to play the farce out, and ascending the steps with a good deal of suppressed indignation, she pressed the bell. The door was promptly opened by a neat-capped maid.

"Is Dr. Robinson in?" she inquired, glibly, improvising the first name that came to her.

"I believe so, ma'am; will you walk in?"

For an instant Dorothy wavered in total dismay. This was a contingency for which she found herself completely unprepared. Then, as her glance roved from the waiting Carey below to the girl, who had stepped hospitably back, her resolution was taken; to go in and explain, on meeting the doctor, that he was

the wrong man, seemed the simplest and most natural way out of the difficulty, and it would rid her of Carey, which was the main thing.

The room into which she was ushered gave her, as a first impression, a sensation of cheer and comfort and good taste. It was fitted up as half office, half library, and a fire on the hearth shed its unstable light on two chairs, drawn up in a suggestively confidential manner within the seductive radiance. Dorothy had made a mental comment of all this, becoming aware that one of these inviting chairs had an occupant, who had slowly risen and was now facing her with an open curiosity which he did not take the trouble to conceal. He was a tall, broad-shouldered, athletic young man, with a fine blonde head, and did not in the least resemble the family physician of Dorothy's infantile ailments.

"I have been expecting you," he remarked, calmly, "won't you be seated?"

"But I called to see Dr. Robinson," explained Dorothy, fully expecting him to claim the distinction.

"I am very sorry," replied the young man, imperturbably. "I am Dr. Robinson's nephew, Neil Sawtelle. He was very uncertain about your keeping this appointment. In fact, he went out, hoping to meet you elsewhere, but left me to receive you if you came, and gave me entire authority to act in his stead."

In the course of her life it is probable that Miss Dorothy had never experienced such a variety of emotions. That it was a case of mistaken identity appeared plain; but how to account for her presence here without betraying her name and her reason for ringing the bell, appeared a problem difficult of solution.

"I am sure there is some mistake," she stammered, at length; "I am not the person Dr. Robinson expects. I simply wanted to consult him about a slight cold, and will call again."

"As my uncle is no longer a practicing physician, I am sure that cannot have been your object." He drew himself up to his full height, which Dorothy found rather overwhelming, and adopted a sterner tone.

"Do be seated," he repeated; "this is a very serious matter, and must be treated seriously. Your acquaintance with my unfortunate cousin is as well known to me in all its details as to my uncle. Why try to deceive me?" as Dorothy made an attempt for a hearing.

"But I am not the person you think I am," she declared; "I am Miss Dempsey."

"Indeed! And to what reason does my uncle, an old bachelor, owe the pleasure of this visit to-day? You must excuse my ignoring the cold."

He made a quick, convincing gesture as she started, hesitated—and was lost.

"You see it is useless," he went on. "I must insist on your remaining until you have answered a few questions; but I must beg that you won't force me to be more impolite than you can help."

"When will Dr. Robinson return?"

"In an hour or two at the most. If you prefer waiting for him, that will be even better," and he drew forward one of the easiest chairs.

"But I can't stay here two hours," cried Dorothy, now thoroughly alarmed, and continuing to stand uncompromisingly.

"Nor is there the slightest necessity for it. Perhaps, if I state the case, it will enable you to see that you can use the same freedom with me as with the doctor, and also, how little we require of you, provided you are honest, and how unpleasant the consequences may be if you evade. There have been great complications in two of the banks with which my cousin is connected, and actual theft has been committed. It has been proved past doubt at what hour the latter occurred, and suspicion has fallen in the highest places. My cousin will be implicated in the arrests unless it can be proved to the satisfaction of those interested that he was elsewhere at the time. By to-morrow, or at the farthest, the next day, all New York may know of it. For some strange reason he refuses to account for himself. Now, all that we require is that you shall state under oath when and where you have seen him since Monday last."

"I don't know what you are talking about, and I don't wish to remain here any longer," protested Dorothy, vehemently.

"Nonsense," replied Sawtelle, almost roughly, interposing himself between her and the door; "my uncle gave me a description of you before he left. The idea of your denying that you know Albert Van Twiller is absurd."

At the mention of the name Dorothy gave a little gasp of horror and amazement.

"Why, of course I know him," she said, unguardedly; and then, seeing too late that she was only strengthening his mistake, she sank into the nearest chair, with a pitiful wail of distress which did not help matters.

"Oh, this is perfectly dreadful!" she sobbed, forgetting her dignity and mopping her eyes with furtive dabs.

As for the blonde giant on the rug, he looked scarcely less uncomfortable and ill at ease.

"I don't see but that you will have to wait till the doctor comes. If I should let you go, it would only mean publicity and an appearance at court, and all sorts of complications, which you ought to be as anxious to avoid as we are, Miss McKinney."

"I am not Miss McKinney."

"Well, my uncle will know who you are, anyway."

"No, he won't," thought Miss Dempsey, and relapsed into a damp and protracted silence.

"I wonder if you would believe me," she said at last, impulsively, turning on him a pair of moist, indignant eyes, "if I told you exactly how I did happen to come here?"

"I am dreadfully sorry. I presume I have made a mess of it," he replied, irrelevantly; "perhaps we had better not try any more explanations till the doctor comes. You see, if I had known you were in the least"—reddening perceptibly—"the least like what you are, I never should have attempted a conversation."

As Dorothy found nothing to reply to this, another half hour passed, reducing her to a state of nervousness that went far toward confirming Sawtelle in his suspicions. At last, to the infinite relief of both, a key sounded in the latch, and bowing politely at her averted head, Sawtelle hastened into the hall.

Already the doctor, a hale, hearty man of fifty, was divesting himself of his snowy overcoat, and on catching sight of his nephew he began to speak in a cheery, excited voice.

"Such a day, my boy! The jade escaped me, in spite of everything, and sailed on a Cunarder this noon. But that isn't the worst of it. No wonder Albert refused to say anything about her. He knew the whole thing would come out, and her testimony wouldn't be worth shucks, for you see, he has married her—married her, my dear boy, do you understand?"

As Sawtelle made no response, he glanced up hastily.

"Anything wrong?"

"Oh, nothing," replied Sawtelle, in a dramatic whisper of despair, "except that I've kept the prettiest girl I ever saw in a state of torture for two hours. She wouldn't explain who she was at first, and seemed so agitated that I never had a doubt about its being the McKinney woman. You said she was dark."

"Black, staring eyes, and as big as an Amazon."

"You didn't say that. This one is small and thoroughbred to the finger-tips."

"Well, well, we must see about it."

And, accompanied by his anxious nephew, the doctor bustled into the room with an apologetic good will that somewhat disarmed the hauteur Dorothy was trying to assume.

"There has been a great mistake, my dear young lady, and one about which my nephew is deeply annoyed; but you mustn't blame him, because he was only following out my instructions, although mistaken in the person. And now, if you will tell me to what I owe the honor of this visit, I shall be very glad if I can retrieve in any way the discomfort you have undergone."

Thus brought to bay, nothing was left to Dorothy but to make full confession.

"I am Miss Dempsey, of No. —, Fifth avenue," she began, but was unceremoniously interrupted by the doctor.

"Not Julien Dempsey's child? I knew he left a widow and a child. Bless me, what a coincidence! We were chums—old chums at Yale, years ago—but go on, my child."

And then followed the whole ridiculous, mortifying tale, to which the doctor listened with open interest.

"I am glad you happened to come here," he said, not quite approvingly, when she had finished.

"And I hope you are going to exonerate me partially," entreated Sawtelle, who had been preparing his line of defence during the recital. "You can't fancy how humiliated I am or how tempted I was to believe you. If you hadn't acknowledged your acquaintance with poor Van Twiller, I should have weakened at the end."

"I do know Mr. Van Twiller, but the acquaintance is only a superficial one. I saw him last at Mrs. Lyle's ball Wednesday evening, and sat with him some time in the conservatory. I was upset because what you told me seemed so terrible."

"But Mrs. Lyle herself mentioned to me that he was not in the house ten minutes," interposed the doctor. "I think she was misled. She fancied him for one of her girls, and now he has thrown himself away—poor Albert."

"Oh, I know how that happened. He told me all about it. He was going home with a Mr. Green, and after he had made his adieux, Mr. Green decided to remain, so he sat out a dance with me, and finally went off without waiting for him."

"And do you know what time that was?" inquired the doctor, eagerly.

"About a quarter or half after one, when my partner for the cotillion came up. We began to dance it about that time."

"Could you swear to it on paper?"

"Why, yes, certainly."

"Then," shouted the doctor, triumphantly, "he is vindicated, whether he explains it or not. This will satisfy the directors so they will drop proceedings where he is concerned. They know already that he is not guilty. It is as plain as daylight to me now. He didn't remember the exact time he left Mrs. Lyle's, and thinking he was with this woman he has married, didn't want to attract our attention to her."

"And now, if you please, I should like to go home," remarked Miss Dempsey, in a pathetic tone.

"Of course, my poor child, immediately. Neil, call a carriage. I will go with you myself, and see your mother, also get your signature, if you will be so kind. It will straighten the affair out wonderfully. Verily truth is stranger than fiction!"

As Dorothy swept from the room, Sawtelle made a brave, if ineffectual, attempt to attract her attention; but as she steadily refused to be aware of his presence, his conscience permitted him to retain a small, soaked wad, which was easily concealed in the palm of his hand. Subsequent events have led us to believe—so tender were his ministrations and pressures between the volumes of a new set of Ruskin—that in course of time it became less like a rag and more like a respectable handkerchief.

It is now over a year since these events occurred, and we hear that the article in question, together with a number of other worldly goods, is to be delivered to its rightful owner. How it all came about, those who have not begun their love affairs with a little animosity will never be able to conjecture, but we have it direct from the lips of the round and ever-rubicund Carey himself.

"The latest engagement, my dear fellow, is Miss Dempsey's to a person named Sawtelle. Why, they say he has never been to a Patriarchs' in his life!"—*Mary Golding Lanman, in the Epoch.*

THE USE OF THE NOVEL.

Nothing is now clearer than that the novel is the popular form of literary expression at the present time. It is worse than idle to insist that it has its faults. If there has ever been a perfect form for expressing the feelings of men, history has left no record of it. The novel is here, and apparently to stay. It expresses the feelings and suits the tastes of the great mass of readers, and the most serious of all the mistakes made by its critics is the idea that it must be a medium for conveying a moral or for giving instruction. It is, as the stage once was and now is to some extent, a means of amusement. It enables countless thousands of people to get away from the dreary, wearing, commonplace things of ordinary life, and to learn something of the lives of others less dreary, or even more miserable than their own lot.

If the novel tells over again the old, old story of love, it still does it under new conditions and to new readers, to souls none the less humanly interested than the many generations that have preceded them. It is one of the charms of a literary form of expression that it always invests the varied forms of life with a new face. And this is true, whether it is the drama, which in one form or another has been accepted for thousands of years, or the poem which never dies nor grows old, or the novel which for the past hundred years has been growing in importance.

It has been found necessary to do over the work of writing the history of human lives for each generation of men. Most of the books which presume to record this die; but most of the books containing the scribbles of versifiers from the earliest days have died. In almost every decade some novel is written that does its work excellently well, and many hundreds that give pleasure and instruction to the great multitude of readers. Let us, therefore, welcome the practice of the novelist's art, always waiting in patience for its highest and best specimens, trusting that the general popular taste may sift the chaff from the wheat, but certain in any event that the wheat will be produced and knowing that it is as necessary now as ever in the history of the race.—*New York Press.*

GOVERNMENT POSITIONS FOR YOUNG MEN.

The real value of the clerkships and other petty offices in government employ is well illustrated by the remark made by a contemporary, which, in commenting on the discharge of a number of government employees no longer needed in their positions, says: "Some of them have not been there as long a time as that they spent in trying to get there."

Young men who think such places very much more desirable than working upon a farm or learning a trade should bear this in mind, and they should also remember that a large share of those who are fortunate enough to obtain and hold such places for a longer time are liable to have to turn out and leave them by reason of a change in the party in power, or some change in rules, just about the time they have become unfitted for any other business. And there is a feeling among business men that those who have been long in government employ, or at least those in subordinate positions, whether in city, state or national government, are always unfit for anything else. It may be an unfounded prejudice, but there seems to be a general impression that, like the Barnacles in the Circumlocution office, as described by Dickens, they have spent their time in learning "how not to do a thing that should be done," and business men of to-day do not like that kind of service.

FOR SCROFULA

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the cure of all
scrofulous diseases,
the best
remedy is

Ayer's Sarsaparilla
Cures others, will cure you

ON THE FRAMING OF PICTURES.

A picture may be well chosen, but its framing may neutralize its effect and render it a distracting object. Hence, the buyer's care must not relax or her taste and sense of the fitness of things be "off guard" till she has selected her frame. A frame should never be more striking than the picture. It should accent the picture, and yet in itself be unobtrusive. It should soften the lines of the wall around the picture, and focus the eye upon it.

Oil-paintings should be framed in gold, silver or bronze. A frame of white and gold is best for a water-color, while engravings and etchings look best in frames of natural wood, either polished or varnished, but never gilded. Photographs can be framed in natural wood or modest, flat gilt or bronze frames, according to the subject and the tone of the picture. Soft gray or cream-tinted mats are the best for pictures in general, throwing the picture back from the glass and softening the effect, but tinted mats may occasionally be used. A dark blue mat when the picture is blue in tone, or a wine-colored, or rarely a silver or gilded one, may be very effective, but should only be used cautiously. The frame for an oil-painting should never be flat, but always thicker at the outer edge, to throw the picture back and increase the perspective in which it is best seen and harmonize it with the walls. Sometimes an oil is of modest coloring and low tone, and is most effectively framed in dark crimson or dull blue velvet, the pile of the velvet softening the picture, yet imparting a luminous and rich effect, which the glitter of a golden frame almost wholly absorbs to itself.

Water-colors are often harmoniously framed in tints which carry out the delicate prevailing color in themselves, especially in landscapes and marines. The mat can often be the palest tint of pink, cream, buff, atmospheric gray or sea-green, while the frame itself may repeat the tint, with delicate lines of gold, or be made of simple white and gilt molding.

The gilded frame is delusive, often being nothing but the cheapest imitation in plaster of Paris thinly gilt. This soon drops to pieces. In good gilded molding there are two kinds worth buying. The French is costly, and has two layers of gold-leaf and a coating of lacquer varnish. This will last a lifetime. The German molding has a single coating of gold-leaf, and then the varnish. It is less costly, and will last many years.—*Harper's Bazar.*

THE PIANO.

The pianoforte was invented by Bartolomeo Cristofori, a harpsichord maker of Padua, Italy, who exhibited four instruments in 1709. The honor was formerly claimed for Marius, a French maker, who produced a piano in 1716, while German writers maintained that Sebaste, of Dresden, was the initiator of the instrument. The earliest date ascribed to the latter's achievement, however, is 1711.

During the present century, however, an Italian document was discovered, written by Marchese Scipione Maffei, a Florentine scholar, 1711, which testifies that Bartolomeo Cristofori, of that city, exhibited four pianos in 1709, which statement was originally published in the *Giornale* in that year, accompanied by a diagram of Cristofori's action principle, employing hammers, which constituted the chief difference between the harpsichord and the piano. In Maffei's writings Cristofori's name is given as Cristofali; but this is proved to be an error, because inscriptions upon existing pianofortes give the name as Cristofori. Father Wood, an English monk living at Rome, is also said to have made a pianoforte similar to Cristofori's in 1711, which he exhibited in England, where it attracted much notice.

Cristofori did not remain idle after introducing his first instrument. He became prominently known as a maker, but died in 1731 comparatively poor. Two pianofortes by Cristofori, at present in Florence, dated 1720 and 1726, show that he anticipated the principles of an improved action and many other points of equal importance in the structure and acoustics of the instrument. All authorities admit that he was a great figure and a genius of no common order.

A GLASS OF WATER AT BEDTIME.

The human body, says a writer in *Hall's Journal of Health*, is constantly undergoing tissue change. Water has the power of increasing these tissue changes, which multiply the waste products, but at the same time they are renewed by its agency, giving rise to increased appetite, which in turn provides fresh nutriment. Persons but little accustomed to drink water are liable to have the waste products formed faster than they are removed. Any obstruction to the free working of natural laws at once produces disease. People accustomed to rise in the morning weak and languid will find the cause in the secretion of wastes, which many times may be remedied by drinking a full tumbler of water before retiring. This materially assists in the process during the night, and leaves the tissues fresh and strong, ready for the active work of the next day. Hot water is one of the best remedial agents. A hot bath on going to bed, even in the hot nights of summer, is a better reliever of insomnia than many drugs.

NO GENUINE PHOTOGRAPHS.

"There are no more photographs these days," said a fashionable Broadway maker the other day as the talk turned to posing before the camera. "Why not?" "Vanity first, style second, vanity third." "Then a woman does not care for a likeness?" "She does, sometimes, but not often; not when she is going to give the card to the man from whom she expects a proposal, or to any stylish relations, or, indeed, when she is intending it for her parlor table." "You make a specialty of women's work?" "I do. And I assure you, in confidence, of course, that you would be thunderstruck if you could notice the difference between the real physical characteristics of the customer who goes in and the finished product as we place it on the counter for her in a few days ready for some purpose of society." "How about the men?" "I am glad you spoke of it. Do not think the women are alone. They are vain, I'll admit, but it is my impression that the male customers are even more fastidious. A man is a hard critter to suit, even at best. He will stand and expect about twice as much flattery as a woman, bless her dear soul." "You would rather shoot a woman, then?" "By all odds. Give me the woman customer, with all her vanities and foibles, for she is much easier to suit, provided always, we flatter her a trifle. But the men are not satisfied even with wholesale flattery. Vanity has thus killed our art." "Killed by vanity?" "Yes, dead as a door nail."

FAME.

The name of no explorer has ever received the honor and renown equal to that of Christopher Columbus. Four hundred years after his great discovery, to have the event celebrated by such a grand demonstration as will be the Columbian exposition, at which the nations of the whole world will gather to pay homage to his name, is not this fame? Not only will tribute be paid to his memory in words, but also in deeds, by the gathering together in one vast display the biggest achievements of this age in the varied branches of art, science and industry. This will be a wonderful exhibition of the progress of mankind in every sphere in life; an exhibition that has never been equaled on this earth. The wonders that will be seen there, the marvelous results of the inventive genius of man will seem to be almost the acts of the creative power. Yet marvelous as it may seem, each perfected idea seen there is the result of the earnest, persistent striving toward the accomplishment of a single object, by each individual inventor or scholar. The same undaunted determination to succeed that upheld the great explorer through all the many and oft-repeated rebuffs and discouragements that he encountered before he reached the successful point in his life, where we show him in our beautiful picture, standing before the Spanish sovereigns, at last in the favor of kings and queens, who granted him the means and power which gave to the world a country destined to be first among all nations.

The beautiful picture, "Columbus at the Royal Court of Spain," is itself a wonderful piece of work. It places the work of the famous artist, M. Brozik within the reach of everyone, and is worthy of a place in any gallery or home.

Notwithstanding the enormous expense of reproducing this picture, we will send one prepaid to any person sending us only three subscribers to this paper, at the regular price, 50 cents a year, or we will send the picture and paper one year to any address for only one dollar.

THE MEDICINAL USE OF EGGS.

It may not be generally known that there is nothing more soothing for either a burn or a scald than the white of an egg. It is contact with the air which makes a burn so painful, and the egg acts as a varnish, and excludes the air completely, and also prevents inflammation.

An egg beaten up lightly, with or without a little sugar, is a good remedy in cases of dysentery and diarrhea; it tends by its emollient qualities to lessen the inflammation, and by forming a transient coating for the stomach and intestines, gives those organs a chance to rest until nature shall have assumed her healthful sway over the diseased body. Two, or at the most three, eggs a day would be all that would be required in ordinary cases, and since the egg is not only medicine but food, the lighter the diet otherwise and the quieter the patient is kept, the more rapid will be recovery.

TO KILL COCKROACHES.

A housekeeper who was recommended to try cucumber peeling as a remedy for cockroaches, strewed the floor with pieces of the peel cut not very thin, and watched the sequel. The pests covered the peel in a short time, so that it could not be seen, so voraciously were they engaged in sucking the poisonous moisture. The second night this was tried the number of cockroaches was reduced to a quarter, and none were left alive on the third night.—*Rural Californian.*

To aid our subscribers we have inserted in our paper a Directory containing the names and addresses of some of the leading implement and machinery manufacturers in the country. See page 4.

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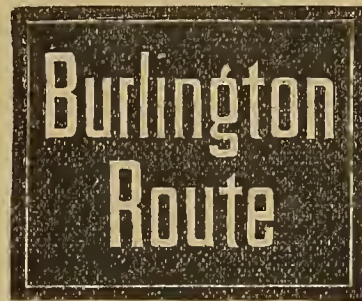
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We will Make Everything Satisfactory or Refund the Money.

We do not guarantee these prices for any number of days. They may advance at any time. Order now, while they are at the bottom. The following are the best and most popular watches of both makes, from which to make your selection:

Offer No. 354. Waltham or Elgin, \$5.50.

Gentlemen's size, with seven jewels. Compensation balance and safety pinion, stem winding and setting, and all the latest improvements. The case is solid nickel-silver that will always hold its color, open face, with plate-glass crystal heavy enough to stand any strain. The usual price of this watch is from \$8.50 to \$12.50. Price to our subscribers only, by registered mail, postpaid, only \$5.50.

Offer No. 355. Open Face Gold Watch, \$12.

Gentlemen's size, Waltham or Elgin, open face watch, stem wind and set, seven jewels and all improvements; gold filled case that is guaranteed to wear for fifteen years. An accurate time-piece that looks just like a \$100.00 solid gold watch. Watch clubs have been selling this watch for \$30.00. Price to our subscribers only, \$12.

Offer No. 356. Hunting Case Gold Watch, \$14.35

This is a magnificent gold filled hunting case watch, gentlemen's size, with Waltham or Elgin works, seven jeweled and all improvements, including expansion balance, plain regulator, etc. This watch sells readily for \$35.00. Remember, that our offer is for the benefit of subscribers only. The case is guaranteed by the manufacturers to wear for fifteen years just like solid gold. Price to our subscribers only, by registered mail, \$14.35.

Offer No. 357. Full Jeweled Watch, Only \$10.

A genuine Waltham or Elgin, fifteen jeweled watch, gentlemen's size, containing all the great patents, such as compensation balance, safety pinion, stem winding and pendant setting apparatus, breguet hair-spring hardened and tempered in form, patent regulator, etc. Cased in heavy nickel-silver case, open face, like that mentioned in offer No. 354. The movement alone in this watch usually sells at \$12.00 to \$15.00. We send the complete watch to our subscribers only, postage prepaid, for only \$10.

Offer No. 358. Full Jeweled Gold Watch, Open Face, \$15.50.

This is a fifteen-year guaranteed gold filled case, containing a fifteen jeweled movement, with all improvements mentioned in offer No. 357. The case is beautifully engraved and is made by placing two plates of solid gold over a plate of fine composition metal. The case is stiffened by the composition metal, and is much stronger than a solid case. It cannot be recommended too highly, yet the price to our subscribers is only \$15.50.

Offer No. 359. Full Jeweled Hunting Case, \$18.50.

The same watch as offer No. 358, except this has hunting case.

Offer No. 360. Gold Watch, Ladies' Size, \$13.50.

This watch, either Waltham or Elgin, is a ladies' size, hunting case, engraved, seven jeweled movement; the case being warranted by the manufacturers to be standard and to wear for at least fifteen years. Any lady in the land would be proud to own such a watch. It is a true time-keeper, and usually sells at from \$18.00 to \$25.00. Any subscriber getting one and wishing to sell it at any time should get at least \$20.00 for it. Price to our subscribers only, by registered mail, only \$13.50.

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Our Household.

THAT RED ROOSTER.

A PARODY.

Hear the red rooster crow
At two o'clock or so.
Oh, he will never know
How he has blundered!
Chickens to right of him,
Chickens to left of him,
Chickens in front of him;
How they all wondered.
"Look at the sun," he said;
"See the sky growing red;
Time to be out of bed."
Oh, how he crew, sir.
"Silence!" his comrades cry;
"Tis but the moon you spy."
He only made reply
That he must crow or die—
That old red rooster.

Hush, friends, draw softly nigh,
Heave a pathetic sigh,
This is a chicken pie,
Object of wonder.
With pie-crust to right of him,
Pie-crust to left of him,
Pie-crust on top of him,
He lieth under.
No more we'll hear him crow,
Red rooster lieth low,
With gravy above, below,
And dumplings to thicken.
Yes, we're bereft of him,
That's all that's left of him,
Left of that chicken.

F. PEIRCE.

HOME TOPICS.

PAPERING.—Most people living in the country are out of the reach of a professional paper-hanger and obliged to do their own papering. It is not a very difficult task when one knows how to go about it.

If the wall has been papered, remove all the old paper by moistening it with a whitewash-brush dipped in hot water. A new, sharp hoe is a good tool to take off the paper. If the wall has been whitewashed, go over it with vinegar and water or glue, water first. Trim off the left edge of the paper rolls, and be sure to match the pattern before cutting the lengths.

A good paste is made as follows: Put into a kettle a gallon of water. Mix a pint of flour with enough cold water to make it smooth and thin enough to pour. When the water boils, pour in this thin batter, stirring it constantly, and as soon as it thickens, remove from the fire and pour it into a pail or pan to cool. It should be perfectly cool before applying to the paper.

Have a board as long and wide as one length of the paper. Lay the paper on this face down, and apply a thin coating of paste with a whitewash-brush, and put it on the wall immediately. Commence in the corner of the room, and work from left to right. Have a step-ladder, and fasten the top of the paper to the wall while an assistant holds the lower part of it straight until you can smooth it down from the top. Some use a dry brush to smooth the paper down to the wall, but I prefer clean, white cloths.

CREAM CHEESE.—Cream cheese is delicious for dessert or as an addition to the tea-table; it also finds a ready sale in most large cities at fifty cents a pound, or twenty-five cents for a half-pound cake,

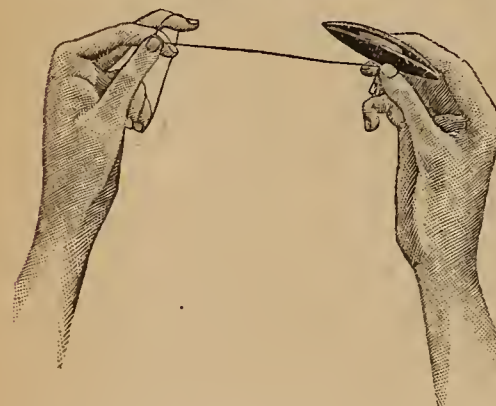


FIG. 1.

which is the usual size. Where there is a market for it, the profit is greater than on butter and the work of making it less. Set the milk in shallow pans, and after it has stood twelve hours, set the pans on a moderately warm stove and let the milk heat until the cream is wrinkled. Then set the pan aside for twelve hours. The cream will then be thick and tough, and can be lifted off with a skimmer. Have wooden molds made, about four by three inches and two inches deep, without bottoms. Lay these molds on cheese-

cloth, folded three or four thicknesses to absorb the moisture. Fill the molds with the thick cream and let them stand twenty-four hours, when they will have a



FIG. 2.

faint cheesy flavor, which will gradually increase. The cakes may now be turned out, each one wrapped in a clean cloth, and they are ready for use or sale.

CARE OF WINTER DRESSES.—If the wool dresses worn in the winter are not put carefully away during the summer, we are apt to find them incapacitated for future wear by the ravages of the moth.

If one has sufficient closet room, the best way to care for dresses or cloaks is to make strong calico bags, long enough for them to hang in; after brushing the garment thoroughly, put it in, putting a stout cord through the loops made to hang the dresses by; let this cord serve to hang the bag and its contents by, tying the mouth of the bag tightly around it. A few moth balls put in the bottom of the bag will be an added safeguard. This will not crease garments as packing them in trunks is apt to do. MAIDA McL.

TATTING.

"Busy-finger work," it used to be called in the days ago, when no young girl ever thought of sitting down for an evening or afternoon chat but that her fingers were fashioning some of the pretty laces and trimmings that were to adorn the dozen or more garments of lingerie which every girl then took a pride in possessing.

Whether it is for better or worse that the times have changed so, who can tell?

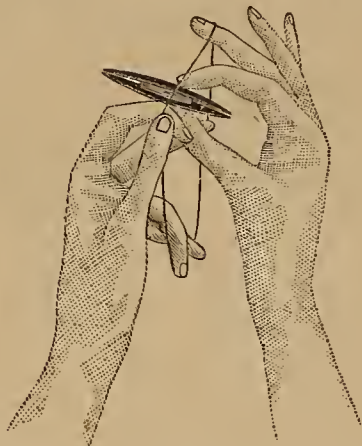


FIG. 3.

True it is that with the fashion of wearing jersey vestments, balbriggan and silk, some of the adornings are changed; and the nowadays girls don't do that kind of thing. Outdoor sports have taken the place of indoor industries, and to-day's girl is more likely to be off on a bicycle ride with her brother than sitting quietly at her mother's side, doing some kind of ladylike hand-work.

Still, when machines can produce everything as beautifully made as one need care to wear, ultra-fashionables must eschew that as entirely too common, and high prices are paid for hand-work. But, as with everything else, exquisite hand-work is hard to find. It is an accomplishment not easy to learn late in life. The woman who, as a little girl, had to pick out her stitches again and again, because they were not dainty enough to suit her old-fashioned mother, through tears learned to set the needle just at the right angle to produce the stitches all alike and scarcely to show on the right side.

For tatting for ordinary wear, use No. 30 thread. Wind the bobbin full, and begin by throwing the thread around the entire left hand, crossing the threads under the forefinger and thumb, as in Fig. 1.

For the weaving there are two motions, one with the thread passing over the bobbin, as in Fig. 2, and one with the thread passing under the bobbin, as in

Fig. 3, holding the thread around the hand loosely, as in Fig. 4, so as to form the stitch. A failure to keep this thread loose ties it up effectually, so that it must be picked out.

It is best to take just the single style, as the clover-leaf pattern shown in Fig. 5. first, and reserve the intricate patterns till you are expert at it. To form the loop for joining, make a space between two stitches, and as it pushes up it makes a loop, through which draw the thread around the hand in the next scallop and pass the bobbin through it. Made of 70 or 80 thread, it is very pretty to trim the dainty dresses of a tiny babe.

If your hands are given to perspiring, dust them with starch in a flannel bag.

Fig. 6 is especially pretty for ordinary muslin wear. The wider patterns are made with the bobbin and an extra spool of thread, using the thread from the spool to pass around the hand and weaving with the thread upon the bobbin.

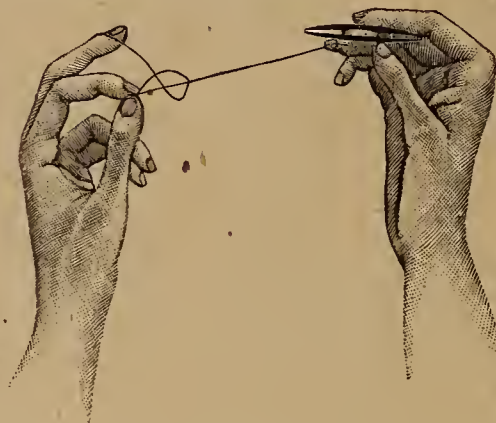


FIG. 4.

Perhaps you can find some one among your friends to give you the initiatory steps, as once acquired, you could never forget it. LOUISE LONG CHRISTIE.

A CALIFORNIA ZEPHYR.

In renewing my subscription to FARM AND FIRESIDE, I feel, with "Blossom" in a recent issue, that it is about time to add my mite and send my thanks for the benefits I have received during the last eleven years that I have been a subscriber. In fact, I could not keep house now without FARM AND FIRESIDE. I have saved every paper, and most of them are bound in self-binders, making them easy of reference.

One correspondent says she tears out the household page and saves it. I think that is rather selfish of her, for father and the boys will surely want their pages saved also.

I use the "New Cook Book" now in preference to all others, and every recipe tried has been a success. The recipe for baker's cream cakes alone is worth double the price of the book.

I want to tell the sisters a nice way to prepare canned fruit for lunches. Fill cups two thirds full of fruit. Put pie-crust over the tops of the cups, place them in a baking-pan half full of water, and bake. MRS. S. O.

Natividad, Cal.

CARAMEL CAKE.

Some of the sisters may want to know how to make a good caramel cake. You can make any common jelly cake. I generally use the following: One cupful butter, two cupfuls sugar, three cupfuls flour, four eggs, one cupful new milk, one teaspoonful of soda, two teaspoonfuls cream of tartar, one half teaspoonful extract of lemon; bake in layers.

FOR CARAMEL.

Put a lump of butter the size of a walnut in a clean brass kettle, one half cupful of



FIG. 5.

new milk and three cupfuls of brown sugar; let boil, and stir until it boils up three or four times, until you think it will be hard when cold; try some on a saucer. Pour out in a meat-dish and take out of doors; stir until nearly cold, add three teaspoonfuls of vanilla. When thoroughly mixed, spread rapidly, or it will get too hard. Spread your top layer first, and set aside until you have spread

the others and stacked them up; then place it on. Do not make many layers, as the caramel will not be thick enough on each one. I have the caramel about one quarter of an inch thick on mine, and when cold, it should be hard, like icing.

TURKEY HENS AS MOTHERS.

Do all the poultry raisers of the FARM AND FIRESIDE know what excellent mothers turkey hens make for little chickens? They are so careful of their charges and so proud of them that it is comical to see them.

I could never understand why turkey hens should not be allowed to raise their own little turkeys, instead of giving them to common hens. Does not nature know more than we can ever expect to know about such things? How do wild turkeys manage to live with the care their natural mothers give them. The food they get seems to agree with them quite as well as a cooked diet of boiled eggs and curds from sour milk and all the other cooked foods we are advised to feed them.

Another thing. What do the wild ones do who have to take the weather rough and tumble, rain or shine, fogs, dews and everything else? They seem to thrive all right, while tame turkeys are supposed to require as much care as the average baby, something like the old darkey said of ducks: "Sartin death, suah, if the top of their heads eber get wet."

But I have got quite away from the starting point, which was an intention to speak a good word for the much-abused turkeys as mothers. Of course, when we have tried to raise turkeys after the latest and most approved methods, we let chicken hens raise them, or try to; but they never made much of a success of the business, never seeming to understand turkey language or habits very well.

But what were the poor old turkey hens to console themselves with? We had one old turkey that was determined to take the little chickens from their mothers, whether or no, and so I concluded to let her raise a brood of chickens, and when she wanted to set gave her a lot of hens' eggs. But they did not hatch out very well, and so I gave her some little chickens



FIG. 6.

that were just hatched, and had been kept in the house in a basket for a day or two until the rest of the eggs should hatch. The old turkey received us with a great deal of hissing and pretended fierceness until we offered her the little chickens, when she cooled down in a hurry, and such manifestations of joy you never saw.

I was afraid she would run them to death; but I had no need to worry, for such wonderful care as she did take of her babies! She would move around with them so slowly, clucking to them, in such a mild, gentle fashion that it reminded me of a good, kind old grandmother; but woe unto the chickens that tried to steal food from her little brood or impose on them in any way, for sure and swift was their punishment, if she had to chase them all over a four-acre lot to administer it. Under her ample wings the little chickens always had an abundance of room and a sure protection from the rain, for the old turkey scorned any sort of shelter, generally stopping at night under a little catalpa-tree that had only been set out a year or two, and if it had not been for the name of the thing, might as well have been no shelter at all. Perhaps she only chose that tree to mark her favorite resting-place in that big, grassy lot.

Another thing that makes them such good mothers, they do not, like hens, wean their chickens when a few weeks old, leaving them to "rustle" for themselves. In fact, they never wean them at all, but run with them until they are grown, and insist on their going to the old roosting-place and being hovered, much to the disgust of the chickens, who, like some children, soon grow too large to mind their mothers. When the chickens

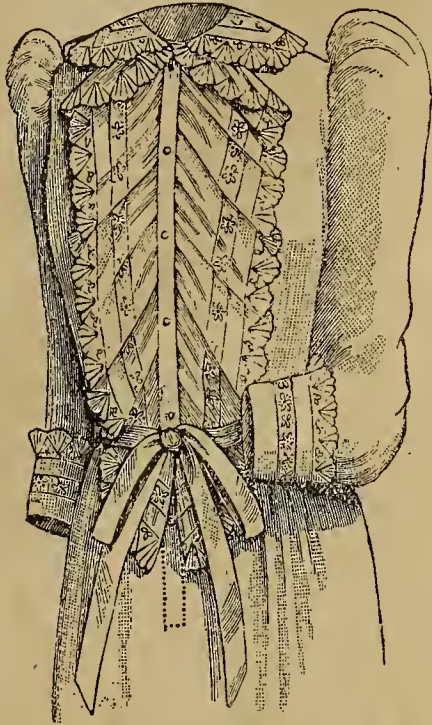
would stray away from her, as they sometimes did, her anxiety was pitiful until she found all those great big chickens and got them together again.

A turkey can care for twenty-five or thirty chickens as easily as a hen can take care of fifteen, and if I had a dozen old turkey hens, I would let them all raise a lot of chickens; that is, unless I should let them raise their own little turkeys, which I think they could do much better than hens.

A. M. M.

LINGERIE.

All underwear is made with the view to clinging effect. Chemises are made entirely without gathers, and as close-fitting as permissible. In this way a more slender effect can be produced.



NIGHTDRESS.

Some of the ready-made nightdresses brought on by our firms are so beautiful, at prices ranging from \$2 to \$4, that many ladies are utilizing them as afternoon house-dresses, by the addition of a knee-ruffle put on of Lonsdale cambric; then, by confining them at the waist with a ribbon, they have the same effect as a simple white dress. One, at \$2.75, is beautiful in every way, and even then costs less than to hire a seamstress.

Many ladies buy the gowns for their little girls in preference to making them, a very good one costing only seventy-five cents or one dollar, and will wear till outgrown. Sisters, buy these hard things to make, and enjoy more of the beautiful outdoors this summer.

CHRISTIE IRVING.

STRAWBERRIES.

No. 2.

STRAWBERRY BAVARIAN CREAM.—Cover half a box of gelatine with half a cupful of cold water, soak half an hour. Mash a quart of berries and pour through a sieve; add a cupful of sugar and stir until dissolved. Stand the gelatine over boiling water; when melted, strain into the strawberry juice, mix, turn into a tin pan and stir until thick; keep on ice and add a pint of whipped cream; pour in a mold and set in a cool place to harden.

CROQUANTE OF STRAWBERRIES.—Cover a tablespoonful of gelatine with cold water and let soak half an hour; add two tablespoonfuls of boiling water and stir until dissolved. Dip a jelly-mold in ice-water. Stem a quart of ripe strawberries, and dip each one in the gelatine; then press against the side of the mold; continue until the sides and bottom are covered, fill the center with charlotte russe and set away to harden.

STRAWBERRY SPONGE.—Cover half a box of gelatine with cold water and let soak half an hour, pour over a pint of boiling

water; add a teacupful of sugar and stir until dissolved; add a pint of strawberry juice and strain in a tin pan, set on ice and stir until thick; then beat to a froth, add the beaten whites of four eggs, mix and pour in a mold to harden; serve with vanilla sauce.

STRAWBERRY PARFAIT.—Whip a quart of cream to a froth, add a pint of fresh strawberries and sugar to taste; turn carefully into an ice-cream mold, press down the lid, pack in salt and ice and freeze, three hours.

STRAWBERRY WATER-ICE.—Mix a pound of sugar and the juice of two lemons together with a quart of strawberries, mash, and stand aside for one hour; strain, add a quart of ice-water, put in a freezer and freeze.

ELIZA R. PARKER.

She measured out the butter with a very solemn air; The milk and sugar also, and she took the greatest care To count the eggs correctly, and to add a little bit Of baking-powder, which you know beginners oft omit. Then she stirred it all together, and she baked it full an hour; But she never quite forgave herself for leaving out the flour.

NO MORE BLUE MONDAYS.

Very few men realize what immense labor there is caused by wash-day. The work that a woman does on that day would be a hard task for a strong man, aside from the danger of taking cold by going out to hang up clothes when heated up with the steam and the roaring fire necessary to boil clothes. We have discovered, however, that the most disagreeable features of wash-day can be done away with, and a very simple method substituted.

We find that by using Frank Siddall's soap according to the directions sent out with it, that the clothes need not be boiled and very little rubbing done. They will not get yellow, and no matter how dirty, this soap will clean them, and yet not injure the finest of them. The soap itself is perfectly pure, being made of beef suet, and the odor of the factory is as pleasant as any dwelling-house. It leaves, therefore, no bad smell in the clothes and also keeps your hands in first-class condition. It washes freely in hard water, and you need not have a boiler in your house, as only warm water is to be used, and a small kettle will heat enough water to do a large washing. Warm weather is here, and you don't want to heat up your house and fill it with steam, so we tell you about this new way and hope you will all try it.

By using this soap the clothes need not and should not be rubbed hard, as soaking them for twenty minutes after rubbing on this soap takes nearly all of the dirt out. You can see that with boiling and hard rubbing done away with, wash-day need no longer be dreaded, and you



CHEMISES.

mothers need not worry over a large wash. We believe that the women would enjoy their Sabbaths more if no thought of the coming "wash-day to-morrow" need worry them.

Besides all this, you and your husband will be surprised at the many things this soap is good for that other soaps cannot be used for on account of impurities, but

we cannot tell you in this article. You can get some of this soap absolutely free by sending to us, according to directions on page 15 of this issue, and you will also receive a pamphlet book telling of the many things this soap can be used for. Tell your friends and neighbors that they can get it free of charge, and persuade them to give it a trial. We would like to introduce it into every home in the country. Read page 15 and write us a postal. Just whisper to your husband that this soap is the best thing ever invented to clean harness with and he will gladly mail the postal for you.

CHAT.

In looking over the trunks and closets this summer, see if you cannot weed out many things you have saved for years. Give away many things you have all outgrown, even books and pictures. All the pretty dress skirts of your family that it is possible to utilize, rip, wash and tie up, to make comforts of in the late summer. This is pleasant work to sit out on the lawn and do. You can be out of doors and still be doing something for winter.

Burn and destroy all old letters of no value; even clothing that has become soiled past cleaning. Nothing breeds moths faster.

For packing away cloaks, nothing is nicer than the moth-proof paper sacks, fifty cents each, that can be hung up, and no moth can enter. Cloaks with fur must be especially guarded.

Get all of the sweet summer you can; eat outdoors as often as possible. Sit out of doors; it will improve your health. Never mind the sun and tan—it is better than ill health. Have some kind of a hammock somewhere about the place, and rest in it some part of every day.

A light framework fixed around a tree and covered with cheap cotton will last one season, and serve to keep off draughts of wind and also to give a little more privacy from the scrutiny of the neighbors.

Throw a blanket down on the grass and tie a little cap over baby's head, put on a light wrap, and let her crawl all around on it and pull clover tops while you read or sew.

On rainy days, give attention to indoor things and fix them up to last till the next rainy day. Coax the children to sleep through the heated part of the day, then bathe and dress them, and all go out for your fresh-air time.

Keep the house well aired from five to seven in the morning, and from sundown to bedtime in the evening, and closed the rest of the time, and you will find it very much cooler.

Watch your early fruits during July and August, as they are apt to mold. Strawberries and the early jellies should be kept up-stairs, where it is warm and dry.

Always keep some kind of disinfectant in the house to use. Air and watch your cellar, as much malaria and fever can be traced to that. A pleasant home is had only at the price of eternal vigilance of the housekeeper. Everyone else enjoys it, but she must see that it is enjoyable.

CHRISTIE IRVING.

[Trade Mark.]
DR. A. OWEN.A FAIR TRIAL
OF THE
OWEN
ELECTRIC BELT

will satisfy any fair minded person that they will do all that is claimed for them.

PROOF POSITIVE

from RELIABLE WITNESSES, sufficient to convince the most skeptical will be furnished upon application.

A PASTOR WRITES ABOUT HIS
TROUBLE AND WHAT CURED HIM:

JACKSONVILLE, FLA., FEB. 11, 1892.
THE OWEN ELECTRIC BELT & APPLIANCE CO.,
New York City, N. Y.
Gentlemen:—This is to say that I was troubled with Kidney Disease, weak back and a general melancholy depression. My appetite was poor and my nights were almost sleepless.
I read of your No. 4 Gent's Electric Belt in Ang., 1891, and on the 16th of Aug. I sent to you for one. It came promptly and I have worn it more or less since the latter part of Aug.
I am pleased to say that nearly all of the symptoms of Kidney disease have disappeared. The pains in back are gone and I feel like a new man. All thanks to Dr. Owen for his valuable discovery. I yet hold on to my belt and find it a sure help and I believe it will be a permanent cure.
Yours, etc.,
Rev. John R. Scott,
Pastor of M. E. Church, Jacksonville, Fla.

Dyspepsia, Indigestion & Rheumatism Cured

BROOKLYN, N. Y., MAR. 17, 1892.
DR. A. OWEN,
New York City, N. Y.
Dear Sir:—Some time ago I was troubled with Dyspepsia and Indigestion. I also had a bad case of Rheumatism in the small of my back. I had read of the wonderful cures by the use of your Electric Belt and I sent for a catalogue. I read it through carefully and concluded to send for one of your No. 4 Gent's Electric Belts. I wore the belt for about four months, and am now on the road to Complete Recovery. The rheumatism has been entirely cured and my other troubles are about gone. I will continue to wear the Belt for a while longer to ward off all other diseases.
I think that Dr. Owen's Electric Belt is the greatest invention of the age. Far superior to all others. I would not take a large sum for my Belt, if I could not get another one like it.
Please accept my sincere thanks for what your Electric Belt has done for me. I hope you will use this testimonial as it may be the means of helping some one that is suffering as I was.
Very Truly Yours,
P. Rossignol,
298 Atlantic Ave., Brooklyn, N. Y.
Persons making inquiries from the writers of testimonials will please inclose self-addressed, stamped envelope to insure a prompt reply.

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contains fullest information, list of diseases, cut of belts and appliances, prices, sworn testimonials and portraits of people who have been cured, etc. Published in English, German, Swedish and Norwegian languages. This valuable catalogue or a treatise on rupture cured with Electric Truss will be sent to any address on receipt of six cents postage. The

Owen Electric Belt & Appliance Co.,

Main office and only factory,

THE OWEN ELECTRIC BELT BLDG.

201 to 211 STATE ST., CHICAGO, ILL.

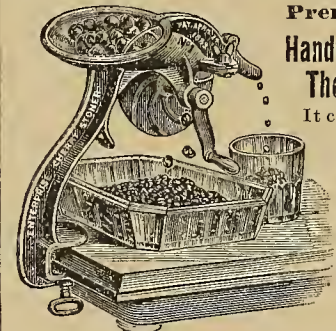
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The largest Electric Belt Establishment in the world.

QUILT PATTERNS! Three beautiful new Quilt Patterns, 10c, one doz. 25c, all different, sent by return mail with catalogue of specialties. MODERN ART CO., New Haven, Conn.

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Prem. No. 688.

Handy! Saves Labor!
The Best Made!

It can be adjusted by thumb-screws for different sizes of cherry stones. It is very rapid, a great time-saver, its capacity depending on the adeptness of the operator. Those having quantities of cherries to "seed" who once try this machine will never be without one. A child can easily operate one and think it only "play." Attached instantly to any table as shown in cut. All orders will be shipped promptly.

Given as a premium for 3 yearly subscribers at 50 cents.

Price, including one year's subscription, only \$1. We offer it for sale for 75 cents. It must always be sent by express, the receiver to pay charges, which will be light. Be sure to give your express office. Send all orders to

FARM AND FIRESIDE,

Philadelphia, Pa., or Springfield, Ohio.

Lawn Mowers at Greatly Reduced Prices.

We present the following superior qualities of these machines, and guarantee them to be exactly as represented and equal to any in the market: Adjustable handle and wood roller, the only positive force clutch in use, large wheels, cold drawn steel reel shaft, tool steel knives, tool steel cutter-bar knife, long bearings, gearing direct from ground wheel to reel. The material used is of the very best, and the workmanship so fine and true that parts from different machines are interchangeable.

They are a standard make, and many thousands now in use are giving perfect satisfaction. Arrangements direct with the manufacturers admit of a special price to our readers.

Premium No. 136, a 12-inch mower, given for 15 subscribers to either the Farm and Fireside or Ladies Home Companion, at 50 cents each.

Price, including one year's subscription to either paper, \$4.75.

We offer it for sale for only \$4.50.

Premium No. 144, a 14-inch mower, given for 16 subscribers to either the Farm and Fireside or Ladies Home Companion, at 50 cents each.

Price, including one year's subscription, \$5.

We offer it for sale for only \$4.75. Each mower will be carefully boxed and shipped by freight, unless otherwise ordered, charges, which will be small, to be paid by receiver.

Address FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio.

Our Sunday Afternoon.

LITTLE THINGS.

A good-by kiss is a little thing,
With your hand on the door to go;
But it takes the venom out of the sting
Of a thoughtless word or a cruel flog
That you made an hour ago.

A kiss of greeting is sweet and rare,
After the toil of the day;
But it smooths the furrows out of the care
And lines on the forehead you once called fair,
In the years that have flown away.

'Tis a little thing to say, "You are kind,
I love you, my dear," each night;
But it sends a thrill through the heart, I find,
For love is tender, as love is blind,
As we climb life's rugged height.

We starve each other for love's caress,
We take, but do not give.
It seems so easy some soul to bless,
But we dole love grudgingly, less and less,
Till 'tis bitter and hard to live.

—Jewish Messenger.

THEY ALSO SERVE.

"They also serve who only stand and wait."
Take comfort from that thought in lonely
hours,
When naught seems set aside for you by fate
To do, while others have far richer dowers.

With days brim full of hope and work and
love,
Full to the brim and haply running o'er,
The angels, watching from their homes above,
Can see how sad the waiting is—how sore.

But if the waiting is not all in vain—
If those who wait are serving truly too—
Oh, then they need not mind the nameless
pain,
But think it is the part they are to do.

And peace and rest will fill the lonely days
That once were filled with naught but pain
and woe,
For, though we cannot understand His ways,
Enough to know our Father wills it so.

—Albany Journal.

NOT UNTO US.

How many of us there are, poor and
unconscious pretenders to absolute de-
grees of virtue, who look on the sorry
soul, guilty or suspected of this or that
wrong-doing, whether at the bar of justice
or the yet sterner bar of public opinion,
and thank heaven that we are not as this
or that object of contempt is!

There are a few of the more venial sins
whose non-commission by ourselves gives
us some shadow of reason for self-grat-
ulation. If we abstain from scandal, and
yet have a lively interest in our neighbors'
affairs, it is a positive virtue, born and bred
of our own intention, though fostered by
what heavenly help we may not say.
Possibly the kindness of heart bequeathed
to us by our forebears should have its own
share of the credit too. But if we abstain
from strong drink, and never allow the
gay drinking-bout to tempt us, is it not
possible that instead of thinking all the
virtue ours, we may question whether the
poor victim whom we may condemn for
a different course has no fiery drop in his
blood beyond his control, given by some
grandparent or some remote ancestor
whose besetting sin was too strong to die,
and lives on in the descendent to the third
and fourth generation? Or if we abstain
from theft, let us think for a moment if
we have ever had any temptation to steal;
if we have not been well provided with
all we need and much of what we wish;
if we have not chanced, through no per-
sonal merit surely, to be so reared as to be
incapable of receiving the idea of taking
what is not our own; if kind Providence
have not so filled our hearts with divine
love that we cannot wrong a fellow-crea-
ture. Let us think what might be our
condition had we been born in narrow
alleys; left early without protection or
instruction; having the companionship
only of base and vile ideas; seeing only
evil faces and deeds; hungry and cold,
and these for whom we have natural kind-
nesses cold and hungry too; taught in-
stinctively that the world owes us a living,
and that we must take it where we can
find it. Perhaps under such circumstan-
ces we might be no better than the person
we now despise; we also might try to
make our condition easier by theft or any
other nefarious means. Not unto us is the
praise due that we are less ignoble than
the poor object whose abjectness we
loathe.

It may be that under no circumstances
can we picture ourselves as committing
great cruelties, as guilty, for instance, of
murder. But if from babyhood we had

been brought up with hardened natures,
receiving kicks and blows and returning
them with the rage natural to the receipt
of brutal treatment, suffering so much in
soul and body as to be oblivious to the
suffering of others, life only a wrestle, no
fine or soft emotion implanted or fed, and
only the bestial stimulated, would it then
be so impossible that the time should
come when anger, hate, jealousy, cupid-
ity or self-defence should both nerve us
to the fatal blow and give to us the out-
ward expression of that which we had
become inwardly? It is not amiss for
us now and then to remember the New-
gate prisoner on his way to death, the
sight of whom made the old divine ex-
claim, "There goes John Newton, but for
the grace of God!"

The poet may say, when he will,

"It is not in our stars, but in ourselves,
That we are underlings;"

it is, at any rate, greatly in our stars that
we are underlings, meaning by our stars
here the fostering and protecting circum-
stances among which we are born and
reared, and in bringing which about we
had nothing to do. And it needs all our
own personal exertion to keep ourselves
from being trodden down in the life-long
struggle between spirit and matter of
which we ourselves are the battle-field, to
keep ourselves out of sin. We cannot
pause a moment, if we are wise, to pat
ourselves upon the back for being other
than this publican and sinner.

START RIGHT AND KEEP ON.

Have decision of character. Character
is like the goldfinch of Tonquin. It is
magnificent while standing firm, but loses
all its beauty in flight. How much de-
cision of character in order that these
young men may be Christians. Their
old associates make sarcastic flings at
them. They go on excursions and do not
invite them. They prophesy that he will
give out. They wonder if he is not get-
ting wings. As he passes, they grimace
and wink, and say, "There goes a saint."

Oh, young man, have decision of char-
acter! You can afford, in this matter of
religion, to be laughed at. What do you
care for the scoffs of these men who are
affronted because you will not go to ruin
with them? When the grave cracks open
under their feet, and grim messengers
push them into it, and eternity comes
down hard upon their spirit, and con-
science stings, and hopeless ruin lifts them
up to hurl them down, will they laugh
then?

HAPPINESS.

The idea has been transmitted from
generation to generation, that happiness
is one large and beautiful precious stone,
a single gem so rare that all search after
it is vain, all effort for it hopeless. It is
not so. Happiness is a mosaic, composed
of many smaller stones. Each taken
apart and viewed singly may be of little
value; but when all are grouped together
and judiciously combined and set, they
form a pleasing and graceful whole—a
costly jewel. Trample not under foot,
then, the little pleasures which a gracious
Providence scatters in the daily path, and
which, in eager search after some great
and exciting joy, we are so apt to over-
look. Why should we always keep our
eyes fixed on the bright, distant horizon
while there are so many lovely roses in
the garden in which we are permitted to
walk? The very ardor of our chase after
happiness may be the reason that she so
often eludes our grasp.

TRUE HEROISM.

Laura L. Randolph, M. D., in the *Chap-
erone* for January, says: "True heroism
dares to speak the truth, however un-
popular it may be, is always brave and
hospitable, giving what it has freely,
without apology for what it has not, or
for the lack of environments that satisfy
the refined and fastidious tastes of cul-
tured acquaintances. The great soul feels
the littleness of common life, dwells
within an atmosphere of its own, and
smiles at the strife of its fellows for
superiority in athletic sports, boating,
driving, fishing, baseball; in wine and
elegance of attire; as well as at the fool-
ishness and folly of women, who are too
apt to measure character by the garments
worn, rather than the value of the wearer.
Woman is everywhere a heroine, both by
nature and necessity."

HARTSHORN'S SELF-ACTING SHADE-ROLLERS
Beware of Imitations.
NOTICE
AUTOGRAPH
OF
Stewart Hartshorn
ON
THE GENUINE
HARTSHORN



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BOOTS AND SHOES.

Awarded highest honors at
Phila., '76 | Melbourne, '80
Berlin, '77 | Frankfurt, '81
Paris, '78 | Amsterdam, '83
New Orleans, 1884-85, and
wherever exhibited.

Paris medal on every bottle.

Beware of Imitations.

This blacking is in liquid form and is applied to
shoes or other articles of leather by means of a
sponge, attached to the cork by a wire, so that the
blackening can be used by anyone without soiling
the fingers. No polishing brush is required. It
dries immediately after being applied, and will
not soil the most delicate clothing. Sold by all
dealers.

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Kennedy's Medical Discovery

Takes hold in this order:

**Bowels,
Liver,
Kidneys,
Inside Skin,
Outside Skin,**

Driving everything before it that ought
to be out.

You know whether you need it or
not.

Sold by every druggist, and manufactured by
DONALD KENNEDY,
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Asthma The African Kola Plant,
discovered in Congo, West
Africa, is Nature's Sure
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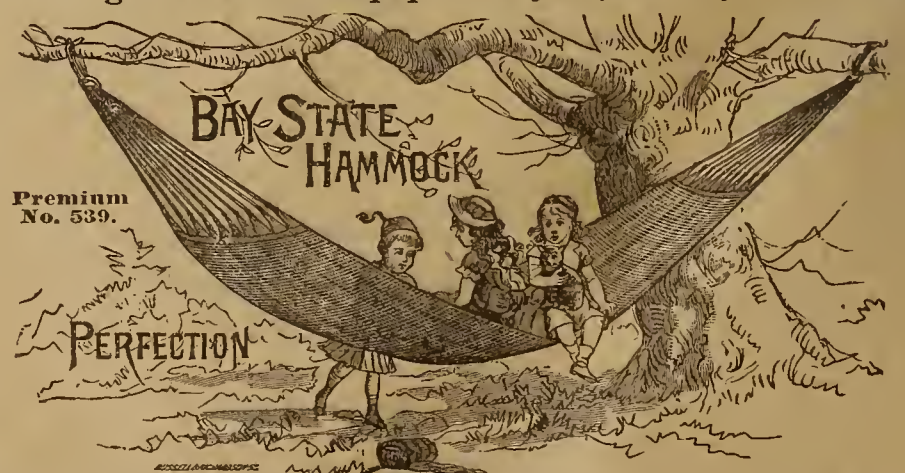
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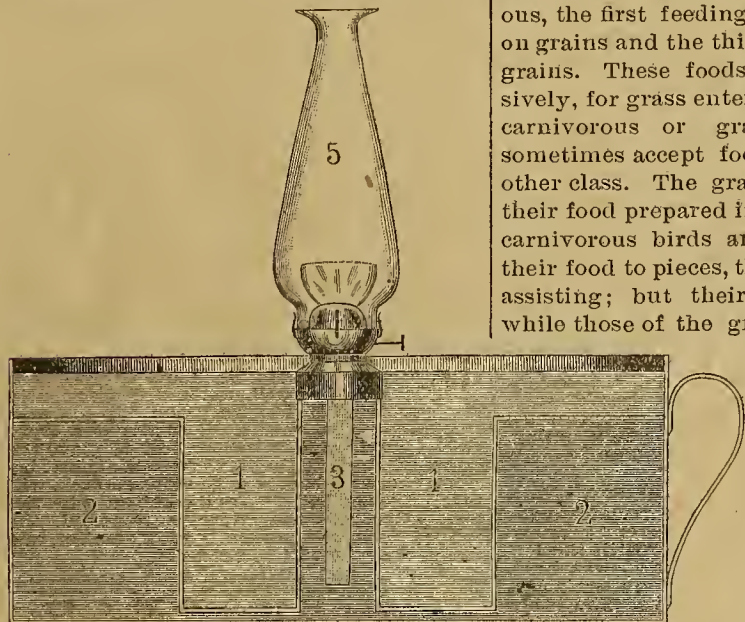
INCUBATOR HATCHES.

If those who use incubators will make a comparison with the results of hatching by hens they will not expect too much. While some hens will hatch nearly all the eggs, there will be some hens whose work will not be so satisfactory. If ten hens are broody, and each is given one dozen eggs to hatch, they will be fortunate if each hen brings off eight chicks. This is eighty chicks from one hundred and twenty eggs. Should as many eggs be left in an incubator as are left in the nests of ten hens the operator would be discouraged, yet the incubator does fully as good work as the hens.

AN INCUBATOR SAFETY-LAMP.

To prevent a lamp from becoming overheated, the designs in this issue are given, from Capt. Phillips, of Chicago. An incubator lamp differs from one sitting on a table, in not having a free draught direct from the top, as the heat must be conducted into the incubator; hence, they sometimes become warmer than is desired.

The originator, who uses it, states that the heat of the lamp (5) and wick tube (3) unite at the base of the burner, watersurrounding them, vapor being generated, which unites with the flame heat, and gives greater warmth. The description is



as follows: The reservoir for water (1) reaches up to the crown of the burner, keeping the oil tank (2) cool, and also cools the wick (3). Four one-eighth-inch tubes to the wick (3) supplies it with oil. The burner and chimney is shown at 5. The cost of constructing such a lamp is less than one dollar. We have not tested the lamp, and know nothing of its merits, but the originator claims that it is not only cheap but safe and reliable, as he has used it for several seasons.

OVERFEEDING LAYING HENS.

Bear in mind that if you attempt to fatten some of the hens for market you must remove those intended to be retained as layers, or the laying hens will become so fat that they will become useless. More loss occurs from overfeeding than from insufficient food, and the result is due to a failure to recognize the fact that a laying hen requires different food from one intended for market.

CONVENIENT DUST-BATHS.

The best dust-bath is a place on the ground that has been spaded, and the stones and gravel sifted out. After each rain (which solidifies them) the dusting-places should be spaded again, so as to keep them fine, dry and loose. The hens will take advantage of them, and enjoy them very much.

GREASE ON CHICKS.

Do not grease chicks if it can be avoided, as too much grease is injurious, and never use coal-oil. If the large lice are found use lard or sweet-oil, the oil being preferred. Ten drops of oil of pennyroyal may be added to a large tablespoonful of the oil, and with the finger rub one or two drops only of the oil well into the down of the neck and head of each chick.

Have you seen our Farm Implement Directory on page 4?

BRAN AND OATS IN SUMMER.

With grass plentiful at this season, it is best to allow but one meal daily, and the meal should be given late in the day—just before the hens go on the roost. The bran and oats (which should be ground) will supply all that is necessary for the production of eggs, if a small allowance of meat is made. A pound of lean meat, chopped fine and cooked to a soup in two quarts of water, the broth to be thickened to the consistency of a stiff dough, with the bran and oats, to be fed cold, will be sufficient for a large flock. The hens should be allowed to eat all that they desire; but as they will come up at night with crops nearly full they will not eat more than a small proportion. The soft food diet is not the best, for fowls thrive better on hard food, but by this method the hens can be given food that will be of advantage to them when they have a range. Give no meals in the morning or at noon, the object being to compel the hens to go forth with empty crops and seek their food, the exercise of so doing being a great inducement to produce eggs. It is very easy to make hens too fat after the weather becomes warmer, and the best remedy to avoid disease and a surplus of fat is exercise.

MEAT A NECESSITY.

Meat is a necessity when the food is lacking in albuminoids, for the production of eggs calls for a supply of certain substances that are more concentrated in meat than in any other food. Birds are carnivorous, granivorous and omnivorous, the first feeding on meat, the second on grains and the third on both meat and grains. These foods are not used exclusively, for grass enters into the list, and a carnivorous or granivorous bird will sometimes accept foods belonging to the other class. The grain-eating birds have their food prepared in the gizzard, but the carnivorous birds are capable of tearing their food to pieces, the gizzards, however, assisting; but their gizzards are thin, while those of the grain-eating birds are very strong and thick.

Our domestic fowls are really creatures of circumstances, being what man has made them by selection and breeding. They belong really to the granivorous class, but man has

made them capable of utilizing all kinds of food. In the wild state the fowls lay but few eggs in a season and cease, and they readily find any proportion of animal food required, in the shape of insects, especially in spring and summer, but the domestic hen is expected to lay at seasons when insects, seeds and grass cannot be had.

If meat is fed it soon returns its cost by increasing the number of eggs laid. It will not suffice to feed fat meat, for such is just the opposite of that which should be used. Meat should be lean, as only the lean contains the nitrogen, which is one of the main constituents of eggs. Meat is not expensive if the coarser kinds are used; and if only fed twice a week it will be of some advantage. There are those who use milk as a substitute, but it must not be overlooked that the hen is not capable of drinking enough milk in quantity to supply the place of meat.

POINTS ON LICE.

1. When chicks droop and appear sick without cause, especially in summer, look for lice (not the little red mites, but the large, gray body-lice) on the heads and necks.
2. If you find them use a few drops of grease of any kind. A teaspoonful of oil of pennyroyal to a cupful of lard is excellent.
3. Look under the wings for the red lice, but use only a few drops of the lard.
4. Never grease the bodies of the chicks unless lightly, as grease will often kill them.
5. Never use kerosene on chicks, unless it be a teaspoonful of kerosene to a teaspoonful of lard, as it is irritating.
6. Crude petroleum is always excellent, and serves as a liniment, but mix it with twice its quantity of lard.
7. Keep the dust-bath always ready. Use dry dirt or sifted coal ashes. Add

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to any one who will sell Six Sets for us. Regular price for this Harness is \$12.00. We sell it for spot cash with order for \$5.25 in order to introduce our goods and show Buyers of Harness how to save money. We are the largest manufacturers of harness in America, and use only the best Oak Tanned Leather in our work. We sell Harness for \$5.25 per set and upward. If you want a SET OF HARNESS FOR NOTHING order a sample set and sell Six for us. The money paid for sample will be refunded when you order the Six Sets (same as sample). Address all orders to

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carbonate of lime, Persian insect-powder or oil of pennyroyal to the dirt.

8. To rid the house of lice, sprinkle coal-oil everywhere—floor, walls, roosts, yards, roof, inside and outside, and repeat often.

9. Dust insect-powder in the feathers, and be sure it is fresh and good.

10. Put insect-powder and tobacco dust in the nests. Never pour grease in the nests. Clean them out every week.

11. Even when no lice may be present, use the sprinkler of kerosene at least once a week; and keep the roost always saturated.

12. No matter how clean things may appear, look for the large lice on the heads, throats and vents.

13. Lice abound both in winter and summer, but more especially in summer.

14. One half the chicks and young turkeys die from lice. Chicks or turkeys with hens, or turkey-hens, always have lice (either the mites or large ones.)

15. Carbolate of lime is the cheapest powder to use for dusting over the floor and walls.

16. Always aim to get the solutions or powders into the cracks and crevices.

17. The easiest and best way to white-wash is with a force-pump. They are now made to force water from a bucket.

18. When your chicks have bowel disease, look for the big lice.

19. No mites need be present where plenty of coal-oil and carbolic acid are used.

20. Lice means work. Repeat these precautions and remedies frequently.

CORRESPONDENCE.

AN EGG RECORD.—From my white Leghorns and Wyandottes, forty-five hens, last year I sold \$72.73 worth of eggs, and used 200 eggs to set. Of chickens I sold \$17.45 worth, old and young, and raised forty young hens for laying. I kept no account of chicks or eggs used for family.

FARMER'S WIFE.

Fairland, Md.

A LADY'S RESULTS WITH FIFTY HENS.—As I am interested in the poultry business, the poultry department is interesting to me. I think success is the best recommendation one can have, whether gained by one year's experience or ten. I have tried two ways with mine; one was, never to see them only when it was unavoidable; and the other was to take care of them. And I find the latter way pays, and pays well. How proud was I of my first dozen hens; and how I petted them till they would get up in my lap for corn. Of course, I had them so fat they could not run, and then when winter came, I thought it was too cold to bother with them, so I left them to get along as best they could, which wasn't very well, for I never got an egg all winter. But seeing so many reports regarding hens and how to manage them in FARM AND FIRESIDE, I thought I would see if there was anything in it for me. Never an article concerning poultry do I miss; and the information I have gained from FARM AND FIRESIDE has been worth many times its cost. It is now just three months since I began a record of my fifty hens. Beginning January 1st I have sold 120 dozen eggs, at an average of about sixteen cents a dozen. And I think we have used not less than ten dozen, not including four or five dozen that I set. I sold one and one half dozen hens, at nine cents a pound, and, all in all, I am very well pleased with the result. My hens are the old-fashioned Dominiques and White Leghorns. As I bought no feed whatever, I do not count the expense of that. In the very coldest weather I gave them sweet milk once, and sometimes twice a day, with warm water once a day. After breakfast I gave them a mess of warm mush, made with sweet milk, and at night I fed corn. They had all the scraps from the table, and some backbones and sausage that we would not eat. I kept them housed in snowy weather, and I count my profit at between twenty-five and thirty dollars. I think it a shame for a man to "pocket the proceeds" derived from his wife's hens, and then compel her to ask for every cent she gets. I wouldn't do it, that's all. I know I would not take such an interest in them if I did not get the money for them. I never lost a chick last summer, and if any one wants to ask any questions, I will gladly answer. My hens have free range, and we raise all they need for feed.

Indiana.

MRS. C. M. W.

HAVE YOU CATARRH.

There is one remedy you can try without danger of humbug. Send to H. G. Colman, Chemist, Kalamazoo, Mich., for trial package of his Cure. Postage 4 cents. Test and judge for yourself. Mention this paper.

INQUIRIES ANSWERED.

Gapes.—L. M., Lost River, W. Va., writes: "How can I prevent the gapes in very young chickens?"

REPLY:—Keep the chicks on a clean surface, and dust the ground well with air-slaked lime once a week.

Brahmas and Langshans.—F. W., Meridian, Wis., writes: "I have selected Brahmas and Langshans. Can you suggest any breeds that are better for laying and for market?"

REPLY:—Your selection is good, as the two breeds are hardy and well suited to your climate.

Effects of Douglass Mixture.—Mrs. F. O., Clyde, Mich., writes: "Two of my roosters are sick, and one dead. They cannot stand up any length of time. I keep the Douglass mixture in their drinking water all the time."

REPLY:—The mixture is a poison, and affects fowls as you describe yours. Cease its use.

Miscellaneous.—H. M., Carlton, S. Dak., writes: "1. Is salt pork injurious to poultry? 2. Is oil-meal suitable as poultry food?"

REPLY:—1. Salt, used to season the food, is beneficial, but salt pork, or salt in excess, is injurious. 2. Linseed-meal (oil-meal) is beneficial when fed three times a week.

The Farm and Fireside Incubator.—C. L., Alto, Iowa, writes: "Please inform me if there is any patent on the FARM AND FIRESIDE hot-water incubator."

REPLY:—There is no patent. The incubator is the property of the public, having been invented and published by the editor of our poultry department.

Chicks Exposed.—Mrs. S. A. L., Reserve, Kan., writes: "When my chicks are three weeks old they begin to droop and become blind, many of them dying. They have no lice."

REPLY:—Due perhaps to exposure to overhead draughts of air at night. There is no remedy except to prevent the draughts. Anointing with a few drops of sweet-oil will relieve them partially.

Feather Pulling, Etc.—Mrs. W. D., Chipewa Falls, Wis., writes: "My poultry are pulling feathers from the necks of each other. What is the cause? Are eggs fertilized with one mating, or are the fowls required to be constantly together?"

REPLY:—Feather pulling is due to lack of exercise, and confinement. There is no sure cure except to separate the guilty ones from the others. To insure fertile eggs the cock and hens must remain together.

Blindness.—J. W. W., Haverstraw, N. Y., writes: "I have a flock of Brahmas, and every few days one of them goes blind in one eye. How long can eggs be kept for hatching? Will disease in the present flock appear in the next flock if eggs from the blind hens are used?"

REPLY:—The blindness is probably caused by a current of cold air from a crack or some source, which comes on the side that the blindness appears. Eggs can be kept for six weeks in a temperature not over 60°, if they are turned half over three times a week. The disease will not affect the next lot, as it is due to local causes and not inherent.

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Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Wild Rice Seed.—D. G., Perrysville, Ohio. You can get seed of wild rice, with directions for sowing, from northern seedsmen who advertise in our columns.

Pasture Grasses.—S. S. M., Hall, Oregon: writes: "What kind of grass will do the best for pasture in low and hillside land, where the ground is shaded?"

REPLY:—The experiment station, Corvallis, Oregon, ought to be able to tell you what pasture grasses are best adapted to your soil and climate.

To Destroy Moles.—An Oregon subscriber gives the following: "Get a few quarts of coal-tar and keep it handy, and when you find their regular run-ways, along fences or around buildings, pour in a little of this coal-tar and put a piece of board or shingle over it so that the hole will not be filled up in covering back the earth, and the tar thus be covered, and you will find this the most effectual way to get rid of them. This coal-tar gets onto their legs and feet and into their hair, and renders them incapable of getting around to throw up earth in finding their food (worms). They die, starve for want of food. I had them about my house and in my garden for nearly twenty years, but never succeeded in getting rid of them till I found out this plan to cover them with coal-tar."

Manures for Peach-trees.—W. A. E., Muncy, Pa., writes: "How much pure bone-meal, kainite and nitrate of soda should I put on two acres of peach orchard (200 trees) from which I took off nine tons of peaches last year?"

REPLY BY JOSEPH:—It seems that in consideration of your 300 or 400 bushel crop you can well afford to be liberal with the orchard. Kainite is cheap, and a fine thing for the peach orchard to keep it in health. I believe that one of its most wholesome effects is that it destroys root-aphis, which are often quite destructive to peach-trees, causing them to develop symptoms, which by many growers are confounded with those of the yellows. Apply 500 pounds to the acre, rather more than less. Of bone-meal, you may use 200 pounds per acre, while nitrate of soda may be used according to the apparent needs of the orchard. If wood growth has been free and thrifty, little or no nitrate of soda will be needed. But if the wood growth was slow and unsatisfactory, apply a hundred or more pounds per acre.

Airing Hotbeds.—V. M. H., Hollidays Cove, W. Va., writes: "I would like to have information on airing tomato hotbeds and cold-frames in frosty weather."

REPLY BY JOSEPH:—The airing of hotbeds and cold-frames is a matter about which iron-clad rules cannot be given. Every grower must use his own judgment. I believe in airing quite freely, even in rather cold weather. What is most desirable is slow but steady, hardy growth. Plants forced quickly in great heat and protection from every draught of air are succulent and tender and unable to withstand the vicissitudes of outdoor life in the early season. I open the sashes a little even in cloudy weather, and still more in clear days, even if the temperature is low. On clear, warm days you can have your sashes up pretty high. But look out for cold nights. Then is the time to give protection, and you cannot be too careful. Whenever a late frost is threatening I cover my frames containing tomatoes and other tender things with mats, shutters or blankets, since I cannot afford to run the least risk. Of course, all beds, with even the smallest amount of bottom heat, are more secure against damage by late frosts than cold-frames, but it is well to be on the safe side, even here. In daytime there is no danger, but so far as the exact amount of ventilation is concerned, everyone must learn by observation, and perhaps, by the use of a thermometer inside the frame, how much is needed.

Bush Lima Beans.—S. M. McG., Chester-ville, Ohio, writes: "What is the best culture of the bush Lima bean? I have seed of Burpee and Henderson's bush Lima bean, and am especially anxious for an extra crop, especially Burpee's. Also about raising onion sets on a small scale."

REPLY BY JOSEPH:—Henderson's Bush Lima, which is nearly a dwarf siver, is as easily grown as any other bush bean, if you will only select warm and rich soil. Plant seed three or four inches apart, and thin plants to stand 6 to 8 inches apart, having rows at proper width for easy cultivation, say 2½ or 3 feet apart. The Burpee Lima bean is a dwarf form the true large Lima, and will require extra pains for best results. It is rather late, and therefore must be started early, if possible, on inverted sod under glass, say May 1st; or if you have warm soil and location you may plant in open ground May 15th. The ground must be rich. A highly-manured, sandy loam with southern or south-eastern exposure will give you good results. Plant the beans in rows not less than three feet apart, having plants not less than 15 inches apart, and give clean cultivation, with frequent hoeings. The plants grow quite bushy and somewhat top heavy, consequently are subject to damage and breakage by wind-storms. You should set a small stake as a support to each plant. For onion sets, use Yellow Dutch (for yellow), Silverskin (for white), and Early Round Red (red); sow thickly in drills ten or twelve inches apart. An ounce of seed should reach over about forty-five feet of drill. The ground should be quite rich and rather sandy, free from stones, lumps, rubbish, etc. Keep free from weeds, and in proper time take up with a garden trowel, and clean the little bulbs by means of sifting in sieves of proper size.

VETERINARY.

Conducted by Dr. H. J. Detmers, Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. DETMERS, 35 King Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column, must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered under any circumstances. This time half a dozen anonymous inquiries found repose in the waste-basket.

Constipation.—M. A. B., Scott, Kan. If your horse is habitually constipated, feed soft and juicy food, especially young grass, which just now can be had in abundance.

An Unthrifty Colt.—G. E. R., Fills Church, Va. Keep your three-year-old colt for at least a couple of months in a good pasture, and at the same time exempt it from all kind of work.

Buffalo Teeth.—E. L., Neponsee, Neb. The teeth you send me are molars and belong to a large herbivorous and ruminating animal, very likely to a young but full-grown buffalo.

Shriveled Up.—B. S., Charlottesville, Va. What you complain of may be due to unwholesome food, but not knowing what your kitchen slops contained, I cannot give any further advice concerning your pig.

A Lame Mare.—D. W. B., Castalia, S. D. Since you say that no veterinarian is available where you live, I cannot give you any advice, because it is utterly impossible to get as much as an idea of the seat and nature of the lameness from your description.

Lameness—Rat-tail.—E. H., Marengo, Ill. The lameness you describe, I am afraid, is incurable; if you think different, the best you can do is to consult a veterinarian and have the horse examined. It is bad business to buy crippled horses on speculation.—A rat-tail is incurable.

Scrotal Hernia.—J. H. S., Scotland, Mo. What you describe is a scrotal hernia, and is easily cured by castration with covered testicle, an operation easily and safely performed by any competent veterinarian. Still, as your colt is very young, it may be best that you wait with the operation until next year.

Diarrhea in Yearling Cattle.—J. R. E., Morristown, Ohio. The diarrhea of your yearlings, you complain of, is probably due to the presence of entozoa; for instance, liver-flukes in the liver. Make a post-mortem examination of the next one that dies and then you will know what you have to deal with.

Rhachitis.—D. P., Le Grand, Iowa. What you describe seems to be a case of rhachitis, due, probably, to an unsuitable diet or food lacking essential constituents. Feed something that is rich in phosphates—bran, for instance, or even bone-meal—and maybe some improvement will take place. Medicines can do no good.

Retention of Afterbirth.—J. T., Seymour, Ind. The best that can be done if a cow does not clean within twenty-four or forty-eight hours after calving is, in most cases at least, to remove the afterbirth by hand; but of course, this must be done carefully, and should be entrusted only to a competent person—a qualified veterinarian.

Tetanic Spasms.—C. F. M., Little Port, Iowa. To request a diagnosis based upon only one symptom is really unreasonable. Your horse, it seems, suffered from tetanic spasms, but whether they were caused by an attack of tetanus or by strychnine poisoning cannot be ascertained from your communication, and I have no other means of knowing.

Pressure on the Brain.—T. B. S., Will's Foundry, Tenn. What you describe was probably due to sudden pressure upon the brain, but how the pressure may have been produced, or what may have caused it, cannot be determined from your description. It probably will not occur again. If it should, you may apply the same treatment.

Milk-colored Eye.—W. M. C., Santa Rosa, Cal. It does not proceed from your communication what you call a "milk-colored eye," whether you mean a so-called glass eye, opaqueness of the cornea or cataract. The former does not impair the eyesight and is not morbid; but opaqueness of the cornea and cataract are morbid conditions and destroy the eyesight.

Bloody Wart.—T. H. S., Carlisle, —, writes: "My work ox has what I thought a bloody wart on his upper jaw. There is a lump below the wart, or whatever it is. It has a neck, for I can run my finger under it all around; it does not seem to hurt only when I touch the hard lump under the wart. It scabs over and does not run any, but looks raw. It is about two inches in diameter."

ANSWER:—What you call a bloody wart may be actinomycosis. If so, apply the treatment repeatedly described in this paper.

Loco-weed.—W. R., Junction, Nev., writes: "There are a number of horses and cattle here that are 'locoed' by eating loco-weed. Please tell me if there is any remedy for them."

ANSWER:—I cannot comply with your request, because I am not sufficiently acquainted with the effect of loco-weed (*Astragalus mollissimus*) on horses, and with the symptoms and morbid changes produced. Maybe that Dr. D. M. Francis, professor of veterinary science, A. M. and M. College of Texas, College Station, Brazos county, Texas, can give you the desired information.

Prolapsus of the Rectum.—J. H. D., Frankford, W. Va. Your hog, it seems, suffers from a prolapsus of the rectum. First clean the protruding rectum with warm water, which will also have the effect of making it more flexible. This done, effect a reposition; that is, work it back into its place where it belongs, but commence working at the outside, so that which has come out last will be put in its place first. Of course, it is also necessary to give the animal such food as will have a tendency to keep its bowels loose, and at any rate, will prevent constipation.

Thorough-pin.—E. T. H., Port Republic, N. J., writes: "My mare has a swelling on the thin part of the hock in the joint. It shows on both sides of her leg; the swelling is soft. The mare is slightly lame when she first starts to travel."

ANSWER:—What you complain of is a thorough-pin, but the lameness, very likely, is due to an existing spavin. The proper time for treatment has passed, so wait until next fall, when, perhaps, in November, the FARM AND FIRESIDE will bring an article on the treatment of spavin and ringbone, etc.

Kicking Cow—Bloody Milk.—M. J. K., Pottsville, Mich. If your cow cannot be managed with kindness, and if her confidence cannot otherwise be gained, she has to be

hobbled while milked, and has thus to learn that not she but somebody else is the master. —Bloody milk—that is, an admixture of pure blood to the milk—is usually due to a congestion of the mammary glands, and a rupture of one or more small blood-vessels. If such an animal is milked gently and often, the ruptured vessels usually soon close and the blood disappears. Medication is useless.

Probably Navicular Disease.—R. B. M., Everett, Mo. What you describe may be navicular disease; still, to make a diagnosis of such lameness from a distance without ever having seen or examined the animal, is almost an impossibility. It is often difficult enough with a most thorough examination. If it is navicular disease, you, very likely, will find the affected foot smaller in circumference at the coronet, and the animal, as a rule, will rest its foot by only touching the ground with the toe when standing in the stable. The behavior of the lameness is about as you describe. Any treatment is about hopeless. Nerving, provided the diagnosis is secured, affords some relief, but is often followed by very bad consequences.

Treatment of Rheumatism.—Dr. T. C. W., Hugo, Ill. If you meet with success in the treatment of rheumatism in human beings, you will be perfectly justified in applying the same treatment to a horse, provided, of course, the diagnosis is correct. A Polyarthritides rheumatica acuta is not observed in horses. Against an acute rheumatic affection of the muscles, which, in horses at least, is a very rare disease, light diet, vivisection and subcutaneous injections of pilocarpinum hydrochloricum have been recommended. Tartar emetic, two drams, and sulphate of soda, sixteen ounces, per day, to be given in the shape of an electuary, also are indicated. If your horse is stiff and "stove up," as a farmer would say, the best remedy may be to exempt him from work and to allow him to recuperate for a couple of months in a good pasture.

Worm Disease.—L. M., Lost River, W. Va., writes: "What must I do for my calves? I have four sick. They have a swelling under the jaw, and get poor in flesh; have a violent diarrhea. I pierced the swelling under the jaw, and it went away. I have tried all the remedies I ever heard of for the scours. Can you tell me what to do?"

ANSWER:—Your calves evidently suffer from hydraemia, due to the presence of entozoa, most likely fluke-worms (*Distoma hepatica* or *lanceolata*), in the liver, and I am afraid you cannot do anything, and that your calves will die, unless they are yet in a sufficiently good condition and possess enough vitality to recuperate after the worms have become mature and have emigrated. Keep your young cattle away from low and wet places and from stagnant water, especially during the latter part of summer and in the fall.

Bog-spavin.—J. G. S., Abbeville, Alabama, writes: "A neighbor has a mule with a 'puffy' lump on the inside of the hock-joint, large and of long standing. It involves the whole joint."

ANSWER:—What you describe is a bog-spavin, or, in other words, a morbid enlargement of the articular ligament, and an abnormal accumulation of synovia. Frequently repeated applications of iodine preparations, for instance, tincture of iodine, are usually resorted to if an attempt is made to remove it; but such an attempt, as a rule, is in vain unless the causes, such as hard work, defective mechanical proportions of the hock-joint, too much concussion, etc., are removed. Besides that, even if the treatment is successful, such a bog-spavin is apt to make its reappearance as soon as the old causes are again acting. Since it does not cause any lameness, it is often advisable to leave it alone.

Periodical Ophthalmia.—R. S. G., Pikes Run, W. Va., writes: "I have a mare eight years old. When I bought her over a year ago there was something the matter with the left eye; water ran out of it like it was hurt. After awhile could see a spot on the sight. Then she lost sight in that eye. The other one seemed all right until this spring. There is a little spot in the front corner of the right eye, and sometimes a milky-looking film over the whole eye. The veins below the eye seem to be enlarged."

ANSWER:—Your mare, it seems, suffers from periodical ophthalmia, or so-called moon-blindness, and will lose the eyesight in both eyes. Daily applications of an eye-water composed of a solution of atropin in distilled water (1 grain to 1 ounce of water) may retard the final loss of the eyesight, but will not prevent it. It is best applied, a drop or two at a time, by means of a small rubber-capped glass pipette. Overfeeding and hard work has a tendency to accelerate the morbid process of the eye disease.

Worms in Horses.—H. W. E., Bristol county, Mass., wants to know what will kill worms in horses. A great many things. In the spring, however, it may be best for the horse to give it the benefit of a good pasture. Whether it is the best for the pasture or for the horses which will afterwards graze on that pasture is another question. A good remedy against ascarides, if carefully administered, is tartar emetic. It may be given combined with powdered licorice root, powdered marsh-mallow root and a little water, in the shape of pills, but to be effective, it must be given in the morning on an empty stomach, and after it has been given, the horse should fast at least six hours longer. The dose for a good-sized, full-grown horse is from three to four drams. In worm diseases, like in many other ailments, prevention is far more valuable than medical treatment. If horses are well kept and well fed, not watered with water from stagnant pools and ditches, not fed with food that has grown on low and wet ground, and not allowed to graze on low, wet or swampy pastures, no worm trouble will occur.

Poll-evil.—A. R., Pollock, —, "A so-called poll-evil—but especially an inveterate case like yours—is, in ninety-nine cases out of one hundred, brought to healing only if treated by or under the personal superintendence of a competent veterinarian, because the surgical operations necessary must be performed correctly and at the proper time. Consequently, an ever so minute description, which necessarily would require a good deal of space—several pages of this paper—is superfluous, and a description not taking everything into account is apt to cause grave mistakes, and therefore worse than useless.

Knuckles Over.—J. W. L., Belmont, Ind., writes: "I have a three-year-old colt which knuckles at the pastern-joint—something I never saw before, all I ever saw being at the fetlock-joint. I first noticed it about six months ago. I thought she would outgrow it, but she gets no better. Can she be cured? The colt knuckles in both hind feet."

ANSWER:—What do you call the pastern-joint, if you distinguish it from the fetlock-joint? If your colt knuckles over, something, though not very much, may be accomplished by judicious bandaging and nutritious food. The bandages are applied for the purpose of supporting the weakened tendons and ligaments, and must be put on with that object

in view. That such an animal must be exempted from all kinds of work is self-evident. See recent numbers.

Retention of Afterbirth.—L. L., St. Cloud, W. Va., writes: "What is wrong with my cow? She was fresh the 20th of March and didn't clean until about a week afterwards. I don't know whether she cleaned all right or not. We didn't notice anything wrong with her until her calf was about a month old. She would leave the pasture, come to the milk-yard, stamp and kick and lay down and roll, and throw her head back. In an hour or so she would seem all right again. She would take these spells once a day and sometimes once in three or four days. She urinates rather frequently, and at times her urine is bloody. She is getting thin in flesh."

ANSWER:—As you say yourself, your cow did not clean; the afterbirth is rotting away, absorption is taking place, and septicæmia or blood-poisoning is the result. In the first place, let your cow, if possible, have the benefit of a good pasture, and besides that, make a few aromatic and antiseptic injections into the uterus. For instance, take for injections warm camomile tea, and to every quart of the tea or infusion add about 10 grains of corrosive sublimate. These injections will prevent any further absorption of pathogenic bacteria.

A Dead Colt.—W. R. H., St. Anthony, Ia. It is utterly impossible to base a diagnosis upon only one symptom, unless that symptom is very characteristic and occurs in but one disease, and in your communication only one symptom—namely, "rubbing the hide off neck and shoulder"—is mentioned. You speak about the medicines you have given, which, having been given at hap-hazard and before you knew what ailed the animal and what treatment was required, cannot aid me in the least in learning anything about the nature and causes of the disease. It would have been far more interesting if you had stated how the disease commenced, how long the animal has been sick, how, when, and on what food, etc., how the animal was kept before it took sick, and if you had observed the anomalies in pulsation, respiration, digestion, color and condition of visible mucous membranes, etc., and communicated the result of your observations. Besides that, in all cases in which inquiries are made concerning the cause and nature of a fatal disease, or a disease which terminated in death, it should never be neglected to make a post-mortem examination and to describe the morbid changes that presented themselves. I am not endowed with the gift of solving mysteries and of seeing hidden things.

A Kicker.—L. C., French Mountain, N. Y., writes: "I have a young mare four years old that kicks in the stable, and has hurt her hock-joint; the point of it is swollen as large as a hen's egg. She is not lame in it. Can I take it off?"

ANSWER:—Before you apply any treatment to a capped hock, you first must remove the cause, which in your case means that you must break your mare of her kicking propensities. You can do it in the following way, and have considerable fun besides: First put the mare in a single stall; then suspend from the ceiling by means of a rope, just behind the mare and within kicking reach, a stout canvas bag filled with sand, at such a height that when the mare will kick the bag will be struck; the bag with sand, of course, retaliates; the mare again kicks, the bag pays back, with interest. Result: The mare will get tired but the sand-bag will not, and consequently will conquer. If you want the bag to begin the battle, you only need to give it a little swing, but I think it will be best to leave the honor of opening the warfare to the mare, because the sand-bag, if only stout enough, will surely fire the last shot and come out the victor. After this the cause is removed, the capped hock will gradually grow smaller, and no spavin cure will be needed.

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Our Miscellany.

It is reported that a number of Indians from the Peruvian forests and a large collection of native Peruvian paintings will be included in the exhibit which Peru will make.

AUNT—“So you took your first dancing lesson to-day? Did you find it difficult?”

WEE NEPHEW—“No'n, its easy 'nough. All you have to do is to keep turning 'round and wiping your feet.”

DON'T RUN THE RISK of your Cold getting well of itself—you may thereby drift into a condition favorable to the development of some latent tendency, which may give you years of trouble. Better cure your Cold at once with the help of Dr. D. Jayne's Expectorant, a good healing medicine for all Coughs, Sore Lungs and Throats.

CHARIOTS were used by the ancients in war and in journeys of pleasure. The ancient chariot had only two wheels, which revolved on axles, and was generally drawn by two horses. It was closed in front and open behind. The four-horse chariot in which Roman generals rode when they entered Rome in triumph was called a quadriga.

A DISH of charcoal placed in your meat larder will keep the articles sweet and wholesome almost as well as ice. Charcoal is a great disinfectant. If occasionally used for cleaning the teeth it will sweeten the breath when everything else fails to.

It is said that there are strange chambermaids at Shepherd's hotel in Cairo. A traveler declares that the one who waited on her room and attended to all the duties of the calling, even to making the beds, was a Frenchman, dressed as if for a dinner party, with white waistcoat and dress-coat, and having the air of a refined and educated gentleman. It was really embarrassing to accept his service in such a capacity.

One lady, on arriving at the hotel, rang for the chambermaid, and this gentleman presented himself. Supposing him to be the proprietor, at the very least, she said: “I wish to see the chambermaid.”

“Madam,” said he, politely, in the very best English he could muster, “Madam she am I!”—*You'll's Companion.*

THE MATTER OF ROADS.

It has been suggested that the American roads be placed under a system of government supervision, and be divided somewhat as the French roads are:

First, national roads. These are to be built and maintained by the general government, and be located with reference to military and postal requirements.

Second, state roads. These to be built and maintained by the several states, and connect the various localities of the states and be planned with reference to the national roads.

Third, county or neighborhood roads. These to be built and maintained by counties and townships, and be located with reference to the classes just mentioned.

Those who advocate this idea say that if our common roads were improved by some such plan as this, we would soon have them in charge of competent and educated engineers. The national roads would probably be in charge of army engineers; the state roads in charge of engineers graduated from the agricultural and mechanical schools, and the neighborhood roads in charge of local men, who, once having had the example set them of how good roads are built, would be entirely competent to do what is usually necessary to be done in making a road of lesser importance. But even under such a plan as this each county should have an engineer to design the difficult work, determine upon the location of routes and inspect constructions and repairs. Strange as it may seem, the proper location of a country highway presents to the engineer more complex problems than the location of a railroad. Country people do not understand this and are not willing to believe it; therefore, the crossroads storekeeper and the village blacksmith are usually thought to be entirely competent to decide upon the best route for a country road.—*Harper's Weekly.*

NEW METHODS IN ASTRONOMY.

A paper on stellar photography, read by Dr. S. C. Chandler to the Boston Scientific Society this week, is destined to attract great attention. The paper embodied the remarkable results achieved by Dr. Max Wolf, a wealthy German amateur astronomer of Heidelberg, Germany, who, while his inventions are exceedingly meritorious, has not as yet described them in print.

Dr. Chandler's paper is drawn mostly from personal correspondence, and is the first public statement in the matter. When it is asserted that Dr. Wolf continues the exposure of his plate to the same portion of the sky for an entire night, but is able to remove it and replace it the next night, and thus continue photographing the same stars for several successive nights, the delicacy of his adjustments and the value of his inventions may be realized. In this way objects which are too faint to be seen in any telescope may be fixed upon the photographic plate and there retained for future consideration.

Dr. Wolf has in this way already discovered seven or eight new asteroids and an otherwise unobserved comet. One discovery which is

indeed remarkable, and which could not have been possible with ordinary means alone, is with reference to meteors. He finds that each flash of light which represents the passage of the meteor from one place to another is a series of flashes, burning up brightly and suddenly fading away, only to flash up again. In a single meteor impression he has found as many as five or six of these oscillations, and the study of this phenomenon will doubtless throw much light upon the investigation of meteors.—*N. Y. Herald.*

THE SALT INDUSTRY IN KANSAS.

The salt industry in Kansas has become important, though so far it has not been very remunerative. There are now thirteen operating plants at Hutchinson, and one each at Anthony, Sterling, Wellington and Kingman, while there are mines for rock salt at Kingman Lyons and Kanopolis. The capital invested amounts to \$3,000,000, of which \$800,000 has been invested in Hutchinson alone.

The actual yield is far below the capacity, owing to the fact that Michigan salt is a competitor on such favorable terms that it can be sold for much less in the Kansas market than can the Kansas salt. This, it is alleged, is the result of the peculiar freight rates fixed by the Western Traffic Association, which enables the Michigan manufacturer to lay down salt at points within forty miles of Hutchinson at less rates than can the producer at the latter point.

All the output of the mines in the state, excepting the rock salt, is controlled by two ownerships, which work together. The Holland Investment Company, of New York, controls five of the Hutchinson plants; while the Hutchinson Salt Company controls the others. The two jointly control the output of the outside mines or plants.

Rock salt as yet has not attained a large sale. The farmers have not yet learned to use it as a fertilizer, and when used for stock, it was said to thicken the cattle's tongues so they could not eat short grass, and also caused sterility.

NO FAMINE IN VODKI.

While the Russian peasants are reported as starving, the manufacture of vodka, a species of whiskey made from grain, is as large as ever. The people may starve for want of bread, but the usual amount of grain must be used for making alcohol. Were all the grain that is used for this purpose in Russia made into bread there would be no famine. Women and children may starve, but men must have their toddy. A poor man once scraped together a few dollars and sent by a neighbor who was going to town for some necessary articles to keep his family from starving. Among other things was a jug of whiskey and some tobacco. As the neighbor was driving away the man shouted after him: “If there ain't money enough to get all the things, get the whiskey and tobacco anyway.” If the manufacture of strong drink could be stopped, every man, woman and child in Russia could be abundantly fed. The bestowal of charity in this case is entirely misplaced. The cargo of the steamship Indiana might better have been kept at home. Could the manufacture of intoxicating drink be stopped, the price of bread would at once be lowered more than one half. Still, the sending of the relief ship to Russia has enabled certain people to pose as philanthropists. The rage for notoriety which is smoldering in the breast of every citizen seizes all opportunities to manifest itself.—*St. Louis Magazine.*

THE CLOVE.

Cloves are the unopened flower of a small evergreen tree that resembles in appearance the laurel or the bay. It is a native of the Malacca or Spice islands, but has been carried to all the warmer parts of the world, and it is now cultivated in the tropical regions of America.

A SOLICITOUS DAUGHTER.

Old gentleman (at head of stairs)—“Sally, ain't it time to go to bed?”

Sally—“Yes, father dear, don't put it off another minute; your health, you know, is not robust.”—*Life.*

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SPRAYING CROPS. “Why, when and how.” By Clarence M. Weed, entomologist of the New Hampshire Agricultural College. Published by Rural Publishing Company, New York.

CATALOGUES RECEIVED.

Finely-illustrated, descriptive catalogue of Buckeye harvesting machinery. Aultman, Miller & Co., Akron, Ohio.

Annual catalogue, descriptive of the best and most complete line of road-making implements in the world. American Road Machine Co., Kennett Square, Pa.

About harrows. What they were, what they are, and what they should be. Catalogue of the Acme harrow. Duane H. Nash, Millington, N. J.

EXPERIMENT STATION BULLETINS.

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UNITED STATES DEPARTMENT OF AGRICULTURE.—(Washington, D. C.) Division of Entomology.—Insect Life, Nos. 7 and 8, Volume 4. Office of Experiment Stations—Meteorological work for agricultural institutions.

ARKANSAS.—(Fayetteville) Fourth annual report, for 1891.

CONNECTICUT.—(New Haven) Bulletin 111, March, 1892. Fungus diseases of plants, and their treatment.

CONNECTICUT (Storrs School Station, Storrs) Fourth annual report, for 1891.

INDIANA.—(La Fayette) Bulletin No. 39, April, 1892. Field experiments with corn. Sugar-beets. Diseases of the sugar-beet.

IOWA.—(Ames) Bulletin No. 15, February, 1892. Flaxseed-meal and oil-meal. Report on farm crops. Varieties of potatoes. Corn-growing. Experiments with fungicides. What to plant on the home grounds. Hints for beginners in dairying. Lice affecting domestic animals. Sugar-beets.

LOUISIANA.—(Baton Rouge) Fourth annual report, for 1891. Bulletin No. 14. Field and laboratory results with sugar-cane.

MASSACHUSETTS.—(Amherst) Ninth annual report, for 1891.

MASSACHUSETTS.—(Hatch Station, Massachusetts Agricultural College, Amherst) Bulletin No. 17, April, 1892. Experiments with fungicides and insecticides. Testing new varieties of grapes and peaches. Protecting peach buds. Amount of copper on sprayed fruit. The Siberian crab as a stock. Girdling grape-vines. Keeping qualities of grapes. Report of spraying apparatus. Outline of work for 1892.

MICHIGAN.—(Agricultural College post-office) Bulletin No. 81, March, 1892. Notes on strawberries, raspberries, Russian fruits and orchard fertilizers. Bulletin No. 82, March, 1892. Sugar-beets—results for 1891. Bulletin No. 83, April, 1892. Insecticides and fungicides. Bulletin No. 84, April, 1892. Roots versus silage for fattening lambs. Bulletin No. 85, April, 1892. Potato tests.

NEVADA.—(Reno) Fourth annual report, for 1891. Bulletin No. 15, January, 1892. Dodder, parasitic on alfalfa.

NEW JERSEY.—(New Brunswick) Bulletin No. 86, April 4, 1892. Spraying for insect and fungus pests of the orchard and vineyard.

NEW MEXICO.—Bulletin No. 4, December, 1891. Fruit, forest, shade and nut-bearing trees. Vegetables. Second annual report, for 1891. Bulletin No. 5, March, 1892. Notices of importance concerning fruit insects.

NORTH CAROLINA.—(Raleigh) Bulletin No. 83, a, February 20, 1892. Meteorological summary for January.

NORTH DAKOTA.—(Fargo) Second annual report, for 1891. Bulletin No. 4, December, 1891. Potato-scab and possibilities of prevention. A disease of beets identical with deep scab of potatoes. Hastening the maturity of potatoes.

OHIO.—(Columbus) Bulletin No. 2, Volume 5, February, 1892. Mangold wurzels and sugar-beets—comparison of varieties and methods of culture.

ONTARIO.—(Agricultural College Station,

Guelph) Bulletin No. 71. Experiments with spring grains. Bulletin No. 72. Roots, potatoes and fodder-corn.

OREGON.—(Corvallis) Bulletin No. 18, March, 1892. Insects injurious to young fruit-trees. Codling-moth. Kerosene emulsion, wire-worm, flea-beetles.

SOUTH CAROLINA.—(Fort Hill) Bulletin No. 3. Analyses of commercial fertilizers. Bulletin No. 4. Fertilizer tests with wheat. Varieties of wheat and oats. Fourth annual report, for 1891.

UTAH.—(Logan) Bulletin No. 11, April, 1892. Blanketing horses and cattle. Sheltered versus unsheltered cattle. Exercise versus non-exercise of stock. Bulletin No. 12. Experiments with garden vegetables.

WASHINGTON.—(Pullman) Bulletin No. 3, February, 1892. Report of farmers' institute, held at Garfield, Washington.

WEST VIRGINIA.—(Morgantown) Bulletin No. 21, April, 1892. Injurious insects and plant diseases.

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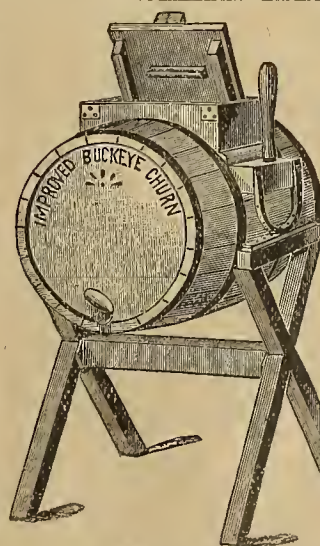
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FREE BY MAIL, ALL CHARGES PREPAID.

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| | |
|---|-------------|
| I promise to use the soap, if sent free, on the whole of my regular family wash, the first wash-day after I receive it. | |
| Mrs. _____, a neighbor, has promised that she will come and see the washing done. | |
| Name _____ | |
| Post-Office _____ | |
| County _____ | State _____ |

Each lady who sends for this soap will also receive a pamphlet book telling of at least fifty other uses for this wonderful soap. It is the only soap that has ever been made in the history of the world that is adapted for all uses.

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EASTERN EDITION.

VOL. XV. NO. 18.

PHILADELPHIA, PA., and SPRINGFIELD, OHIO, JUNE 15, 1892.

TERMS {50 CENTS A YEAR.
24 NUMBERS.

The Circulation of FARM AND FIRESIDE
this issue is

250,800 COPIES.

The Average Circulation for the 24 issues of
the last 12 months has been

273,158 COPIES EACH ISSUE.

To accommodate advertisers, two editions
are printed. The Eastern edition being
100,300 copies, the Western edition
being 150,506 copies this issue.

Farm and Fireside has More Actual
Subscribers than any Agricultural
Journal in the World.

Current Comment.

WHILE the weather is warm and the butter is soft, it is quite refreshing to read Mr. Talcott's article in this issue on ensilage and the dairy. To emphasize what he says about the advantages of winter dairying, we present the following statement taken from the books of a very successfully managed co-operative creamery in the Elgin dairy district. The first column gives the price paid for milk per hundred pounds, and the second column the average price received for butter each month of the year 1891:

| | MILK PRICES. | BUTTER PRICES. |
|----------------|-----------------|------------------|
| January..... | \$1.10 per cwt. | 26½ cts. per lb. |
| February..... | 1.22 " | 30½ " |
| March..... | 1.30 " | 31 " |
| April..... | 1.00 " | 26½ " |
| May..... | .73 " | 21½ " |
| June..... | .61 " | 17½ " |
| July..... | .65 " | 17½ " |
| August..... | .90 " | 22 " |
| September..... | 1.10 " | 25½ " |
| October..... | 1.30 " | 30 " |
| November..... | 1.28 " | 28½ " |
| December..... | 1.25 " | 28 " |
| Average..... | \$1.03½ " | 25½ " |

The butter made at this creamery was sold regularly each week at the Elgin board of trade price. The price paid for milk was fixed by the price obtained for butter. On this co-operative plan the dairyman receives the highest possible price for his product. Note carefully the monthly variation of milk and butter prices.

Taking this table of actual prices as a basis, let us compare summer with winter dairying. Beginning with May and running nine months, the average paid for milk per hundred pounds was \$.99 1-9. Beginning with August and running nine months, the average price was \$1.17 2-9, a difference of \$.18 1-9 per hundred, or nearly 1-5 cent per pound, in favor of the winter cow.

The summer cow averaging 20 pounds for 276 days will produce 5,520 pounds of milk. At \$.99 1-9 per hundred the butter value of her milk is \$54.71. At \$1.17 2-9 per hundred the butter value of an equally good winter cow is \$64.71, a difference of \$10 clear profit in favor of the winter cow. In the foregoing, no account has been taken of the skim-milk. It was hauled home from the factory and valued for farm use at \$.10 per hundred pounds of fresh milk. Including this, the yearly returns of the summer cow would be \$60.23, and the winter cow, \$70.23.

But this does not tell the whole story. The summer cow gives her heaviest flow of milk when the price of butter is the lowest; the winter cow is at her best

when the price of butter is the highest. On good farming land winter feed costs less than summer pasture. Taking these two things into consideration, the difference in favor of the winter cow is nearer \$15 than \$10.

In connection with winter dairying comes ensilage feeding. Experienced dairymen claim that by the use of ensilage they have reduced the yearly cost of keeping a cow \$10. Add this to the gain of \$10 to \$15, and you have \$20 to \$25 gain over the profit received from the summer cow. In other words, the summer cow gives a profit of about \$25, the winter cow gives a profit of \$35 to \$40, and the winter cow fed on ensilage gives a profit of \$45 to \$50. *Winter dairying with ensilage feeding can double the net profits.* The profits are what we are all after.

Let us next compare co-operative dairying with ordinary farm dairying. The progressive dairyman, who thoroughly understands his business and uses only the very best methods and appliances in his home dairy and turns out the choicest article of butter in the world, is left out of consideration, because his number is not legion.

As most cows are summer cows, our summer cow will afford the fairest comparison. She furnished to the factory 5,520 pounds of milk, the butter value of which was \$54.71. The cream-separator took all the butter-fat out of the milk; the ordinary farm methods of handling the milk do not. The separator shows an annual average gain of over twenty-five per cent in quantity. Common country butter sells for less than two thirds the price of separator creamery butter. The butter value of the milk of our summer cow handled in the country dairy is, therefore, only \$29.18. A \$5 calf and \$5.52 worth of skim-milk bring her yearly returns up to \$39.70, a profit of about \$5. In the co-operative dairy her yearly returns, including the calf and skim-milk, were \$65.23. The \$25.53 is clear gain over the small profit of the farm dairy, without saying a word about the drudgery saved.

Our summer cow is a good one. In the co-operative dairy she gave a large profit; in the farm dairy she gives a small profit. How about the ordinary cow? The margin is wide enough for her to give a fair profit in the co-operative dairy, but in the farm dairy her owner is working for less than Chinamen's wages.

Where should co-operative dairying be established? In every district in the country adapted to dairying, where the farmers and business men are progressive enough to take hold of it and manage it successfully. An exception may be made to this. In regions where the roads are impassable six months in the year, the problem of taking the milk to the factory is a serious one, and should be taken into consideration. Unless there are enough cows within a reasonable distance, it will not pay to operate a factory. The better the roads, the larger the territory the factory can draw from. Since no other farm industry except milk supply equals the butter dairy, here is another argument in favor of good roads. Factory dairying with the centrifugal cream-separator system has made a revolution in the business. Its many advantages over farm dairying are no longer questioned.

THE annual report of the secretary of the Elgin board of trade states that the sales of 1891 were 25,006,652 pounds of butter at an average of 25½ cents, making \$6,272,502; 6,232,492 pounds of cheese at an average of 8 cents, making \$498,599; total, \$6,771,101.23.

In the last twenty years the Elgin sales amounted to nearly 152,000,000 pounds of butter and nearly 117,000,000 pounds of cheese, the total cash value of which was \$47,613,250.71. During this period the average price of butter was 28¾ cents a pound; cheese, 8¾ cents a pound. The Elgin board of trade now has two hundred and seventy members, and sells the products of two hundred and thirty butter and cheese factories.

The United States is a two-billion-dollar dairy country, there being that amount invested in the business.

FROM the report of the department of agriculture on wages of farm labor, we take the following:

"Average conditions of agriculture and wages of farm labor are well illustrated in the record of the central belt of states on the parallel of 40 degrees. The statement of wages without board for nine investigations, covering the changes of a period of a quarter of a century, is as follows:

| STATES. | 1892. | 1890. | 1888. | 1885. | 1882. | 1879. | 1875. | 1869. | 1866. |
|-------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Pennsylvania..... | \$23.00 | \$22.80 | \$22.24 | \$22.52 | \$22.88 | \$19.92 | \$25.89 | \$28.68 | \$29.91 |
| Ohio..... | 22.63 | 22.10 | 22.21 | 23.00 | 24.55 | 20.72 | 24.05 | 26.35 | 28.46 |
| Indiana..... | 22.75 | 22.25 | 22.50 | 22.20 | 23.14 | 20.20 | 24.20 | 25.42 | 27.71 |
| Illinois..... | 24.25 | 23.25 | 23.20 | 23.50 | 23.91 | 20.61 | 25.20 | 27.32 | 28.54 |
| Iowa..... | 26.20 | 25.41 | 25.60 | 25.33 | 26.21 | 22.09 | 24.35 | 28.39 | 28.34 |
| Nebraska..... | 25.75 | 25.50 | 25.59 | 25.00 | 24.45 | 23.04 | 24.00 | 33.25 | 38.37 |

"While farmers have suffered from low prices of certain products, they have been unable to reduce the rates of wages. It might be supposed that the depression in agriculture, of which so much has been said and written, would be attended with a decline in the rate of compensation paid for labor. This has not taken place. The demand is well sustained. Wages have not declined. Many a farmer complains that labor costs too much, that values of products do not warrant the rates demanded, and yet he must have it and promptly makes the engagement. It is the compulsion of competition, an indication of general employment and a fair degree of prosperity.

"The returns give a true explanation of the apparent anomaly of low prices and high wages. There is a difference in employers. Some are progressive, increase the fertility of their lands, use the best methods and implements, employ labor, pay good wages and make money. Others are less enterprising, diligent or progressive, and make small net profit or none at all. As margins of profit grow narrow, skill is at a premium, wastes are ruinous, the skillful succeed, the careless go to the wall. The returns are full of indications that the present is a crucial test of the individual farmer. They teach the necessity of progress in agriculture, and especially a facility for prompt adaptation of current effort to changing conditions. In comparison with other countries, American farm labor stands first in rate of compensation. The present rate of \$282 per annum for labor of the Caucasian race can scarcely be approached by any country, unless by Australia. An average of other countries cannot be authoritatively stated, but current estimates have been frequently quoted about as fol-

lows: Great Britain, \$150; France, \$125; Holland, \$100; Germany, \$90; Russia, \$60; Italy, \$50; India, \$30. The present rate can only be maintained by keeping up the fertility of the soil, utilizing the best results of invention and skill in implements and machinery, advancing the status of practical agriculture, supplying all domestic demands for all required products, and seeking foreign markets for the surplus."

OWING to excessive rainfall, corn-planting was much delayed. In a very favorable season corn can mature in ninety to one hundred days. In an ordinary season it takes from one hundred and ten to one hundred and twenty-five days. Counting from the fifth of June, this takes the crop close to the danger line of frosts. The best that the farmer can do under the circumstances is to keep the cultivators going constantly now to hasten the early growth. Allow no crust to form on the surface soil through which the water from the subsoil reservoir can escape by capillary attraction and evaporation. A mulch of surface soil will save moisture for the probable midsummer drouths, and keep the corn growing rapidly.

During wheat harvest and immediately after the corn crop is too frequently neg-

lected. That is the very time when frequent cultivation counts for most in the yield of grain. Let the later cultivations be as frequent as necessary, and shallow. A light, one-horse cultivator, once between rows, can finish the work when the corn is large enough to shade the ground well.

If the fall wheat is to follow the corn, the proper cultivation of the corn crop puts the ground into the proper condition for its successor.

Build silos and take no chances of early frost. The corn crop is ready for the silo before it will do to go into the shock. Late corn, even in a short season, will be ready for the silo before frost. The food value of the grain is about one half that of the entire corn-plant at maturity. It has been demonstrated that the silo is the best means of preserving full food value of corn. The danger of losing much of the value of the present late-planted corn crop will force growers to a careful consideration of the advantages of good silos.

Progressive dairymen, with good silos, sweet ensilage, proper grain rations and a little sweet clover hay, are making golden butter cheaper in midwinter than from grass in June.

A NORTH DAKOTA subscriber writes: "In the May 15th issue is a note on this a billion-dollar country; but you failed to go far enough and say that we had a billion-dollar congress under Tom Reed's rule." True, but neither did we say anything about the present billion-dollar congress. The appropriations made by the first term of the present congress surpass those of the first term of the preceding congress, and have utterly ruined all the fond expectations of making billions of political capital out of Czar Reed's billion-dollar congress.

FARM AND FIRESIDE.

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Our Farm.

BULLETIN AND OTHER SUGGESTIONS AND
COMMENTS.

BY T. GREINER.

AL PRINTER'S ERROR.—The com-
positor who set up my "Mis-
cellaneous Suggestions," ap-
pearing in FARM
AND FIRESIDE of
May 15th, does not seem to be much of
a Frenchman. The historical French
phrase I quoted there is "*j'y suis, j'y
reste*." I protest against the printer's
version of it.

BEETS FOR SUGAR.—In regard to the un-
satisfactory outcome of many of the ex-
periments in raising beets for making
sugar, reported from the Ohio station, I
would add that it is a well-known fact,
recognized especially by the beet-sugar
makers of Germany, that soil and ma-
nures have a very marked influence upon
the percentage of sugar contained in the
beet. Virgin soil, and soil manured heav-
ily with fresh barn-yard manures, or ni-
trogenous fertilizers of any kind, are very
liable to produce a rank, succulent
growth, and a great yield of beet but a
small percentage of sugar. Probably a
sandy loam, not excessively rich in hu-
mus, but well fertilized with mineral
manures, such as wood ashes or phos-
phates, and especially potash, will be best
for the development of roots that contain
a large per cent of sugar. In short, it is
not every soil nor every kind of manure
that is wanted for this particular purpose,
and if the experiments heretofore made
have not always been encouraging, it is
nothing more than must be expected.
The experiment stations have a wide field
of labor before them, if they undertake
to find the right conditions as to soil and
management best suited to raise beets for
sugar-making purposes. The profitable
production of beet sugar was once a seri-
ous problem with a large manufactory in
Hungary. The establishment had been
run with great loss for a number of years.
An uncle of mine in Germany, an expert
sugar maker, was called, and he under-
took the job to run the institution for
half the net profits. He managed to get
a trifle larger percentage of sugar out of
the beets, and soon his share of the profits
amounted to many thousand dollars a
year. That beet-sugar making in this
country has not been made to pay big re-
turns does not indicate that it cannot be
made profitable. Sometimes a slight
change in methods will make a big change
in the final results.

The importance of the right kind of
soil was pointed out in an earlier bulletin
of the Michigan station. I quote as fol-
lows: "Soils containing an excess of veg-
etable matter, such as reclaimed muck

beds, or containing an excess of nitrates
or materials promoting large growth of
tops and delaying the ripening process in
the fall, are not suited to raising beets
with a large percentage of sugar. Some
reclaimed swamp lands will produce a
large crop of beets, but containing little
sugar and worthless for manufacturing.
A sandy loam or a clay loam with an
open, porous subsoil is well suited to
sugar-beets." The Michigan station re-
ports a percentage of from 14 to 16 per
cent of sugar, and only a small amount
of non-saccharine material in the juice,
from beets that were grown on open and
porous soil, and under a system of culti-
vation favoring the growth of rather
small beets (one to two pounds) and their
complete ripening.

WHEAT INSECTS.—The Ohio exper-
iment station reports in its April bulletin
on several insects which burrow in the
stem of wheat. One of these is the wheat-
straw worm, which has been doing con-
siderable mischief. It is two-brooded.
The adults of the second are small, almost
wholly wingless, and nearly all females.
These appear early in spring, and deposit
their eggs in the growing wheat, placing
them usually in or near the embryo head.
The eggs in time produce worms, which,
in June, develop a brood wholly (so far as
known) of females, robust and provided
with fully-developed wings. This brood
is the one that diffuses the pest all over
the country. The eggs are deposited in
or near the joints of the straw, more fre-
quently the second below the head. The
worms from these reach maturity and
pass to the pupal stage in the fall and
emerge in early spring as adults.

The joint-worm, another species of
Isosoma, develops in galls more or less
apparent in the walls of the culm. Both
insects pass the winter in the stubble, and
here is the weak point in their life history
—the point where they are vulnerable.
Burning the stubble during fall or winter
must of course destroy them. As the
spring brood of the wheat-straw worm is
wingless, we can also prevent their
spread, in a measure, by a thorough sys-
tem of crop rotation. The wheat-stem
saw-fly also belongs to this order of in-
sects (including also the ant, bee and
wasp). The eggs are deposited in the
growing stems, and the insect passes the
fall and winter in the stubble; hence, the
same remedies or preventives mentioned
for the other wheat enemies may be ex-
pected to give good results for this.

Now let me call the reader's attention
to the frequent recurrence of the advice:
Rotate your crops! This is a matter that
cannot be urged too strongly. Thorough
rotation—planting each crop as far as pos-
sible away from any place where that or
a similar crop was grown the year before,
is one of our safest and surest means of
preventing the attacks of insects and
plant diseases. It may need a little study
to accomplish this rotation most effect-
ually, but it is well worth that, and it can-
not be overdone.

THE SPANISH SALSIFY.—The recently
introduced Mammoth Sandwich Island
salsify is quite an improvement on the or-
dinary kind, and for several years I have
planted it to the exclusion of the older
variety. Prof. Bailey, in Bulletin 37 of the
Cornell University Experiment Station,
describes a new vegetable of this kind, the
"Spanish salsify," which, he says, prom-
ises to be of considerable value in this
country if once generally introduced. It
is a native of southern Europe, and makes
a root much like salsify, except that it is
much lighter colored and considerably
longer. Its flavor is less pronounced than
that of the salsify, but when carefully
cooked it possesses a very agreeable qual-
ity, which is somewhat intermediate be-
tween that of the salsify and parsnip. It
is adapted to all the methods of cook-
ing employed for those vegetables. Its
particular value is in its large size and
productiveness compared with the salsify.
Almost twice as much was grown on a
given area. No doubt it could be sold
for that vegetable on the general market.
The seeds are much easier to handle and
to sow than those of the salsify. It is
sown and cultivated in exactly the same
manner as that vegetable, and can be dug
either in the fall or spring. I believe seed
can be had from Messrs. Thorburn & Co.,
of New York City. I am planting some
now, and think the vegetable, on the

strength of the recommendation of so
good an authority as Prof. Bailey, well
deserves a thorough trial in every garden
whose owner likes salsify or vegetable
oyster.

WHERE TO LOCATE FOR FARMING.

During the past few weeks I have re-
ceived several inquiries from farmers and
gardeners who are considering the sub-
ject of a change of location. As the ques-
tion appears to be one of general interest,
I will present my views thereon publicly,
through the columns of FARM AND FIRESIDE.

The primary object of immigration is to
improve one's condition financially, to
secure a better condition of health, or an
increase of comfort and convenience.
These are all desirable objects of attain-
ment, but they do not invariably result
from a mere change of locality.

BALANCE BETWEEN ADVANTAGES AND
DISADVANTAGES.

It is claimed, as a general rule, that the
advantages of any one section are just
about counterbalanced by the disadvan-
tages. Nature rarely bestows more than
a fair share of her gifts upon any one
place. Where the skies are always bright
and the temperature genial, the soil is
often poor or there is a great lack of
moisture. Where crops are the most
cheaply and easily produced, there pro-
duce sells low, and often cannot be sold
at all. Where the soil is a light, sandy or
gravelly loam, it can be easily worked, but
a heavy clay soil where the labor is
doubled is, when properly managed, by
far the most productive. Fertilizers
are a necessity upon light soils; drainage
and skillful cultivation are equal neces-
sities upon heavy ones. In the physical
world—the world of force—there is a well-
known law that "what is gained in power
is lost in time and space," so in the nat-
ural world we everywhere meet a great
law of compensation. These are general
truths of almost universal application.

Consider the question of health with
reference to climate. Where the air is dry
and the temperature moderately low, con-
tagious diseases are rare and health is gen-
erally good, but the duration of life is
comparatively short. In more moist cli-
mates, where the temperature is higher,
certain diseases are more frequent, and
yet the average duration of life is longer.
I have dwelt upon this point at some
length, because there is a widespread
notion that certain localities are much
more highly favored than others. No
one will deny that certain sections of our
country are better adapted to certain
crops than are other sections, but these
other sections have their special adapta-
tions also. A given climate may be bet-
ter for certain conditions of health, but
for average healthfulness climates do not
vary so much as many suppose. The fact
is that much more depends upon the per-
son than upon the place, and the man
who already has a reasonably good farm
has but little occasion to ask, "Where
shall I go?" It is the kind of farming,
rather than the place, which tells. We
know this is the fact because men succeed
as farmers in the East, West, North and
South. Thoroughly good farming ap-
pears to pay about as well in Ohio as it
does in Iowa, and men are making money
by cultivating the soil in Kansas and Wis-
consin, just as they are in New York and
Massachusetts.

MIGRATION.

"But don't you believe in migration?
Don't you think there are many who
would improve their condition by a
change of location?"

Yes, I do believe in moving. I believe
that there are hundreds of young men
and women who can greatly improve
their circumstances and prospects by mi-
gration, just as thousands of the older
generations improved theirs by so doing.

For many of the younger generation,
migration has certain definite advantages
that ought not to be overlooked. In the
first place, good farming land is cheaper,
as a rule, in the newer and less improved
portions of our country than in the older
settled. It is not only cheaper, but it is
morally certain to increase more rapidly
in value. With our improved and cheap-
ened transportation, the great West will
develop more rapidly during the next
twenty years than it has during any
period of the past. The eastern and cen-

tral states will not be depopulated, but
the railroads and the depreciated values
of farm products makes the westward
movement inevitable. Many portions of
the South invite immigration as they
never did before. Her mines and man-
ufactories are being wonderfully de-
veloped, and this is making an hitherto
unknown home market.

In many parts the climate is strangely
attractive. Timber is plentiful, the rain-
fall is equable and sufficient for the produc-
tion of all farm, orchard and garden crops.
The land is still cheap; perhaps, all things
considered, cheaper than in the West; cer-
tainly cheaper than it can long remain.
From personal observation I am quite con-
fident that good farms and comfortable
homes can be secured more easily and
with less privation here than almost any-
where else. If these golden opportunities
are improved by the young, the strong
and the vigorous, the rewards will be cer-
tain. Men of small means and large
families can secure and pay for a farm
more readily where the country is still un-
developed and the rural population some-
what sparse. I know that pioneer life is
rough and rugged, that it is one of priva-
tion and toil, but all things of permanent
value must be paid for, and a good home,
free of encumbrance, is a valued posses-
sion.

When I meet, as I often do, the substan-
tial farmers of Ohio, and see their fine,
well-stocked and improved farms, where
they live surrounded with every needed
comfort, and learn that many of them
came into the state in their youthful days,
with no capital save good health, good
habits and a determination to succeed,
and realize the full value of the compe-
tence and distinction they have won, I
must favor migration. I know that the
same opportunities exist to-day, and I am
anxious to see them improved.

BENEFITS OF A CHANGE.

Another strong reason for immigration
is the fact that a change of location often
makes a man more energetic and aspiring.
Many young men live so long dependent
upon or under the immediate directions
of others, that they have developed no
power of independent thought and action,
perhaps no fixed habits of industry and
economy. To be thrown upon their own
resources, and to have their lot cast
among strangers is often a great blessing
to all such. They are compelled to think
and act for themselves. With wants un-
supplied, they feel the necessity of per-
sonal effort, and they work and think,
labor and study as they never did be-
fore.

Migration, like everything else, may be
abused. Many change their locality for
no valid reason, and fail to improve their
condition, yet, despite these occasional
failures, the instinct that impels our
young men to seek new and untried
fields of labor is a true and beneficent
one. It has developed energy and enter-
prise, thrift and industry, where these
qualities were lacking.

But immigration need not be to the
West or South alone. From authoritative
reports, I judge that the soil of New Eng-
land is about as cheap, all things con-
sidered, as that of the far West. He who
buys a farm in the eastern states need
pay scarcely more than the worth of the
improvements thereon, and by judicious
adaptation can raise products with which
the West and South can never successfully
compete. Fruits and vegetables pay, and
timber will always be in demand and can
be more cheaply and surely grown in the
East than in the West. With corn, wheat,
oats and live stock it may be otherwise,
and yet many an eastern farm will also
produce these with equal satisfaction and
profit. While the center of wheat, corn,
pork and beef production have steadily
moved westward, the center of garden,
orchard and dairy products is still well
to the eastward.

Before making any radical change in
locality, one should study well the char-
acter, determine, as far as possible, the
capacities and possibilities of the place to
be selected. It will generally be found
that the old methods and practices are not
adapted to the altered circumstances of
the new home. Many men fail because
they have a blind devotion to a certain
routine or method of work, which the
changed conditions render almost value-
less. A farmer, no less than a man in
other pursuits, must adapt himself to his

surroundings, or choose his surroundings with reference to the special line of work he expects to follow.

It would be a great mistake to make a specialty of grain-raising in the more rough and rugged portions of the eastern and central states. The spacious wheat and corn fields of the fertile Mississippi valley and the great north-west, will be the grainary of the East for many years to come. New York and Pennsylvania have long ceased to raise wheat enough for home consumption, other products which offer a better return being largely substituted. It would be a mistake of equal magnitude to attempt to establish a large commercial orchard in the exposed prairie regions of the North-west. Some fruit can be grown in almost every section of our country. Even grapes and peaches are grown beyond the limits of those climatic conditions most congenial to them, but this is not often attempted for profit, for it is a work wherein success is likely to cost more than it is worth. No one would be foolish enough to attempt the growing of the finer fruits as a commercial business, except in favored localities.

One more important point regarding change of locality. If possible, select the place where you would prefer to live and die. Take plenty of time to make a deliberate and well-advised choice. Resolve to buy once for all, considering carefully the matter of health, society, school and church privileges, roads, etc. Let us not forget that these conveniences and privileges have to be paid for, and that we often have to choose from among them; we may be obliged to forego things desirable in order to have those that are indispensable.

Some farmers are restless by nature and form the bad habit of moving from section to section or roaming from state to state. This is a common and costly mistake. He who lives by cultivating the soil should have an intimate acquaintance with it, and an equally intimate knowledge of the climate. This is only acquired by years of observation and study in the same locality. Choose your home where you will, and our great country is diversified enough to suit all tastes, but having chosen, regard that choice as final.

WILLIAM R. LAZENBY.

Ohio State University.

ENSILAGE AND DAIRY.

The above-named subject has brought to my desk, I presume, fully one hundred letters of inquiry from almost every state of this union. Three and a half months of continuous sickness has prevented my answering but very few of the letters, and those I did were very briefly done. My former articles in FARM AND FIRESIDE is what drew the fire. Most of these I will now answer through the press as fast as FARM AND FIRESIDE can give it space. My experience and

CONTINUED SUCCESS

in silos, ensilage and the dairy make me write with greater confidence every day. During last winter I had in my dairy barn twenty cows that were fed good, warm, moist ensilage both morning and evening, with a dry feed of hay at eleven A. M. and water in the feed-manger and water-troughs once a day—immediately after dinner—and with this generous feed and care they furnished us a continuous flow of milk, and from it we made the pure, golden butter. I desire you all to imitate, for you cannot very well excel. From this butter we had a constant flow of money coming into our hands for daily use. From the ready sale of good butter in market every day of the year, no other industry but milk supply can equal the butter dairy. The great problem to solve to-day is to cheapen production and improve quality. Can we do it? Can everybody do it? Can the one, two and three cow dairy equal the excellence of the greater ones? Yes, I say, but how many will try to do so?

First, let me speak of

THE SILO

because this is the time for its preparation if you build this season. All who have growing timber on the farm had best utilize it for a silo or more. Cut and haul the logs to the sawmills, and have the lumber sawed, and well stuck up in open air to dry. It will be seasoned enough by the first of August for silo building, and is better for the work than thoroughly

seasoned lumber. Cheap, single-thickness, one-inch-board ceiling and flooring silos are equal to any kind on earth for ensilage-preserving, and do not cost but a mere trifle as compared with solid masonry or concrete silo. My very lengthy description of wooden silos in last year's issues of this paper makes it seem unnecessary for me to repeat in full to-day, but as new readers to this great club are constantly added, let me say, build the wooden silo, grow the very largest variety of corn for ensilage that will mature in your locality, and then cut it and fill the silo when fully matured, and you will have the sheet anchor for success in cheap production of the very best quality of butter on earth.

These silos, as a rule, are the most economically made on the second floor of cattle barns, and the basement rooms of barns will never be made too large as soon as you adopt silos and ensilage, because it will immediately increase the number of cattle needed on the farm, and extra stable room will be required. So big basement rooms will be needed for the dairy barn. Ensilage, when being cut to fill a silo, can be elevated from the ground outside the barn, up to and over the tops of twenty to thirty foot high silos with perfect ease and no expense, providing you have a traction engine power cutting-machines. You can utilize any barn you already have upon the farm, as ensilage farming requires less room for storing winter feed than any other kind of fodder used upon the farm. If second floor silos are made, provide extra heavy joists or double the number already in, and then bridge them thoroughly every four or five feet apart the whole length of the joists. In addition to this put under extra supports in such a manner that it will not interfere with your cattle stable room below. If your silos come clear down to the ground in some old hay bay-part of a barn, let the ground itself be the floor, ditching it and draining as well as you can outside of the barn and under the foundation wall of the barn. The studding to nail the ceiling of a silo on should be from twelve to sixteen inches apart; one ten feet deep only will bear the pressure of ensilage when filled, if made sixteen inches apart, and one twenty feet deep should certainly be as thick or close together as every twelve inches. There is a great lateral pressure of the ensilage in deep silo pits. If several silos are built side by side, make all partitions just as strong as outside of the pits, and always ceil them up first, then the side ceilings placed against them will effectually prevent their ever bursting out of place, as you empty the pits one by one when feeding time comes.

Studding should be at least 2x8 or 2x10 inches, the same width of your barn timbers, so the ceiling inside the pits will always be straight and smooth from top to bottom of the pit. Use narrow ceiling, none of it over four inches wide, planed and matched and all clear stuff, because when filled with wet ensilage it then soon swells the lumber so it is perfectly airtight and water-tight, and that is all the requirements of a silo. It then becomes a perfect place to preserve ensilage, as a glass fruit-can is to preserve fruit. A single thickness of board ceiling is far better than two put together in any manner you choose, because as soon as you empty the pit the lumber dries out perfectly, and will last for many years; but if two thicknesses are used, moisture will be retained between the two boards for a long time, and decay of the lumber is inevitable. Use the same ceiling for flooring of the silo pit.

COW STABLE.

I have two dairy farms, twelve miles apart, with silos made both ways. My home farm is a stone basement barn with silos above. The cattle all stand on basement floor. I have raised platforms for them, four feet and seven inches long, manure gutters back of this twenty inches wide and six inches deep, and still back of that a plank walk six inches high and two feet wide against the wall, so we can at all times walk behind our cattle with clean feet and comfort. My feed manger runs the whole length of the barn, partitioned off for each cow, and water-troughs the whole length on both sides of the stable, and we can water all the cattle at a time in these troughs from a deep well at one end of the barn.

It seems perfection; the cattle enjoy it and give us large returns in milk. I do a

WINTER DAIRY BUSINESS

mostly, make the most butter when it sells for the highest prices, and it is also far the easiest and cheapest time and way to make it. The cold atmosphere makes ice or cold water unnecessary. Fresh milk cows furnish cream that churns easily, and fresh ensilage makes a good quality of butter. I churn it myself every other day and like the exercise. We sell it faster than we can make it. Some one is always waiting for it. We get our cash when it is delivered, and if politicians smash the government all to pieces and steal the surplus cash, as I have no doubt they will, I shall have faith to believe my dairy and the good, sweet butter business will keep us floating proudly upon this sea of trouble and happy, if so constituted, and the business will always be good and true.

HENRY TALCOTT.

VARIABLENESS OF THE TEMPER OF BEES.

It must be admitted that in some respects bees are "like folks," or, more correctly, perhaps, like some folks. A colony of bees to-day are in a gentle mood and invite and entertain company, while tomorrow the bees resent intrusion and sting at the slightest provocation.

For example, a colony of Italians, the wonderfully gentle bees, according to some authorities, was opened to show a visitor, a woman, the queen. Veils were worn, but the visitor stood by the hive with bare hands and nothing over the head except the veil. Frame after frame, covered with bees, was taken from the hive until the frame was found on which was the queen.

Not a bee made a hostile movement. For the time being the bees were like so many flies. Three days later the same colony was opened for the benefit of another visitor, this time a man, and immediately the bees fell upon both keeper and visitor with the fury of hornets. At that time the bee-keeper received more stings than in all the time he had been keeping bees. The stinging was fast and furious. Both were obliged to retire in precipitous haste, the first time the bee-keeper was driven out of his apiary.

What could make the difference in the behavior of the bees? Gentle as a zephyr to-day, rough as a whirlwind to-morrow! In the case cited there was nothing to give any clue. One to whom the story was told declared that the bees respected the first visitor because a woman, but that explanation can hardly be accepted.

As to the gentleness of the Italians, there is no doubt that generally they are more docile than other bees; that is, colonies will average more docile, but occasionally there are Italians that are persistent stingers. If a farmer have a kicking cow that cannot be cured, he will sell, probably for beef. If a bee-keeper have a colony of determined stingers, let him kill the queen at once, for a colony of ugly, "touchy" bees in an apiary is a pest and a nuisance, pure and simple.

As soon as discovered, destroy the queen that no more of her race may help to make wretched the life of the beekeeper. To such a colony, however, it is often difficult to introduce a queen, they are so persistent in their ugliness, that they appear to object to everything out of pure spite. But after they have been left queenless a while, they will begin to see the error of their way, and at last be glad to receive a queen, even a plebeian black queen that has no Italian ancestry.

SHEEP-RAISING IN THE PINEY WOODS.

By the term "piney woods" is meant all that region of the United States along the south Atlantic and Gulf coast, including southern Georgia, Florida, south Alabama and Mississippi, with that part of Louisiana lying east of the Mississippi river.

It is a most curious and interesting region to an Illinois man who may visit that country, especially in the winter. The fortunate man who was born and raised on a prairie never has a very high estimate of a timbered country anywhere, and the boundless southern pine woods do not impress him any more favorably than other forests. In fact, a careless, unobserving, prairie-raised traveler cannot appreciate the piney woods. In his heart he has a kind of pity for the people who live there, and especially when he finds that these people think they have

the finest country in the world. He will find the southern people of that region pitying him because he has no more sense than to live up North, where they imagine it is cold enough to freeze him to death.

This brings us to an appreciation of one of the marvelous advantages and charms of that region. The absence of winter, as we know it in northern Illinois, has indeed a fascination about it. It has advantages that cannot be seen nor outlined. It compensates for very many things we in the North know very little about.

The absence of stores of winter feed is so new that the estimates we have of a stock country all vanish into thin air. The man who has been accustomed to feeding sheep from four to six months of the year, feels that it is pure shiftlessness to try to raise sheep without corn-cribs full of corn and plenty of hay-stacks. If he is not wise, he is apt to say so, which will not add to his welcome in the least. If he is wise, he will keep his eyes and ears open and his mouth shut; at least guarded enough to be considered a gentleman.

About the first live domestic animal he will see in the piney woods will be a few sheep scattered here and there—two, three, or four in a place. But there they are, looking for all the world as if they were lost in the woods. They will be near the road, a little further off, and as far as he can see, maybe half a mile away. The woods are so unlike what we have been accustomed to, especially in the absence of underbrush. The woods are open, trees more or less scattered, and grass grows everywhere. You will have the impression that it is the biggest woods in the world.

The impression that these sheep are lost is strengthened by the fact that there may not be a house within ten miles. The ideas of security for sheep are out of the question with all proper ideas of sheep-raising, and he will feel a contempt for a man who shall believe that his sheep are all right without a shepherd, out in the woods, away from a house, and for months and months the owner neither sees them nor knows where they are.

If he should be asked where they are, he would say, "Out in the woods." If asked if he could go to them, he would smile at your question, and say, "No." Should your curiosity be aroused and your good manners fail, and you would ask if he could not go within a mile of them, he would laugh at the very strange ideas you had of sheep husbandry, and assure you that he could possibly go within twenty miles of them. Then you would be sure the sheep were lost, and inquire if he expected to ever see them again. He would assure you of that expectation.

R. M. BELL.

OCEAN FREIGHT RATES FOR DAIRY PRODUCTS.

The transportation rates from New York to Liverpool for cheese during April have been \$6.00 per ton of 2,240 pounds; butter, \$7.20 per ton. The rate from New York to Bremen on cheese is 50 cents per 100 pounds; butter 60 cents per 100 pounds. To Havre, cheese 40 cents per 100 pounds; butter the same.



Mr. Joseph Hemmerich

An old soldier, came out of the War greatly enfeebled by Typhoid Fever, and after being in various hospitals the doctors discharged him as incurable with Consumption. He has been in poor health since, until he began to take

Hood's Sarsaparilla
Immediately his cough grew looser, night sweats ceased, and he regained good general health. He cordially recommends Hood's Sarsaparilla, especially to comrades in the G. A. R.

HOOD'S PILLS cure Habitual Constipation by restoring peristaltic action of the alimentary canal.

Our Farm.

LITTLE THINGS IN SHEEP-RAISING.

"Anything that is worth doing at all is worth doing well," is an old maxim. Little things make up the duties of life, domestically, socially and financially, with the housewife, the husbandman, the professional man, the merchant, the manufacturer, the mechanic and the capitalist. The sheep industry represents all that there is in the above.

A few ounces of wool, a pound of mutton, a little more time and a little more food represent the difference between profit and loss. The personnel of the flock, the business care and accurate judgment of the owner are responsible for the results obtained.

A cheap ram at the head of the flock may handicap the whole situation. An old or feeble ewe lessens the chances of profits to a desperate per cent. It is a little thing to nurse a poor sheep through the winter at the expense of a lamb, a fleece, a deal of patience and a food supply that would have kept a strong, vigorous sheep, that would have given eight pounds of clean, strong wool and raise one or two valuable lambs.

It is a little thing to let a sheep go lame for days and weeks with a thorn in its foot, to grow poor, when two minutes' time would have remedied it all.

It is not a big thing to let the pasture be overstocked for a little while until a change can be made and generous supplies of grass given, forgetting that the growth of wool and lambs has to be stopped, as there is no vitality to share for these purposes.

It may be a little affair to allow the sheep to drink from a nasty pool; but they are drinking the germs of parasites that a little later on may carry off the lambs with a "queer, unknown disease."

It is not an alarming affair, when the sheep are feeding from a low, wet place in the pasture that during a drouth has become dry, and has lots of grass the sheep can get while the hills are all dried up. These wet places are prolific breeding grounds of all the animal parasites known to the ovine race.

It is not an unusual thing to find the flock reduced in vital conditions before noticed; but that is the time for the breeder of parasites, both internal and external, to develop and assert themselves, decimating the flock in spite of human skill and industry.

No, these are all little things; but they could have been managed. R. M. BELL.

EXTRACTS FROM CORRESPONDENTS.

FROM KANSAS.—Republic county is well known for its fair crops. Last year wheat yielded 28, corn 30 to 75, oats 40 to 90, flax 8 to 15, barley 30 to 50 bushels per acre. Corn is worth 34 cents per bushel; oats, 25 cents; wheat, 60 cents. We have a fine country for raising stock and poultry. Plenty of water is found at a depth of 15 to 40 feet. Land is worth \$10 to \$50 an acre. Good farm-hands get \$18 to \$25 per month. B. H. C.

Kackley, Kan.

KILLING TURTLES IN A DUCK-POND.—I live on the top of a high mountain, where there is a natural reservoir covering two acres. It abounds in frogs, snakes and turtles. I undertook to raise ducks, and the turtles cleaned up nearly the whole business; I have known them to catch the grown ones. I conceived the idea of trapping them. I killed a rabbit, got a steel trap and baited it with portions of the rabbit, fastened securely, and dropped the trap in the water. In about a week I caught twelve nice large ones, and I can continue catching them as long as I keep the trap baited. The advantage of trapping them is, they are firmly secured; you either catch them by the "nape of the neck" or some other projecting point. And there is no ulcer meat than turtle. Come up and see me, and I will set before you as nice turtle soup as you ever ate, and no mock turtle, either. T. T.

Fullerton, Ala.

FROM SOUTHERN OREGON.—After six or eight weeks of cold, rainy weather, summer suddenly burst upon us. Frost damaged our fruit prospects somewhat, making a clean sweep of pitted fruits in some localities; yet we will have plenty. Grain and grass prospects were never better than now. With three political parties in the field, things in that line are lively; no man can forecast the result, and candidates are on the anxious seat. I have frequently, through this medium, spoken of the advantages this section offers to those who, for any reason, desire a change of location. I still maintain that there are few more desirable localities for those of small means, say from \$1,000 to \$3,000. Cheap lands can be had here for apple and prune orchards;

Farm and Fireside Directory

OF

FARM IMPLEMENTS, MACHINERY, ETC.

This Directory will be found very useful to those who want any kind of farm implements, machinery or vehicles, and our readers will find it to their interest to write to the firms named for catalogues and information before deciding what to buy.

Always mention the Directory when writing to those whose names appear in it, for Farm and Fireside subscribers will secure special attention from them.

We aim to give in this Directory the addresses of reliable manufacturers and dealers in articles that are wanted by farmers and country people. All of these firms are well known to us, and we do business with many of them. So great is our confidence in them that we guarantee to return to our subscribers any money that may be lost by trusting any one whose name appears in this Directory, who turns out to be a deliberate swindler.

This offer is to actual subscribers only, and is a positive guarantee to make good any loss occasioned by swindlers.

BALING PRESSES.

Whitman Agricultural Co., St. Louis, Mo.

BARB WIRE.

Kelly Barb Wire Co., Chicago, Ill.
Buck Thorn Fence Co., Trenton, N. J.

BINDERS, REAPERS AND MOWERS.

William Deering & Co., Chicago, Ill.
Johuston Harvester Co., Batavia, N. Y.

BUGGIES AND CARRIAGES.

The Anderson & Harris Carriage Co., Elmwood Place, O.
Studebaker Bros. Mfg. Co., South Bend, Ind.

CORN PLANTERS.

Keystone Mfg. Co., Sterling, Ill.

CREAMERY, BUTTER, CHEESE, DAIRY MACHINERY, CENTRIFUGAL CREAM SEPARATORS, Etc.

Flint Cabinet Creamery Co., Flint, Mich.
D. H. Burrell & Co., Little Falls, N. Y.
Davis & Rankin Bld'g and Manuf'g Co., Chicago, Ill.
P. M. Sharples, West Chester, Pa.
Vermont Farm Machine Co., Bellows Falls, Vt.

ENGINES.

Armstrong Bros., Springfield, Ohio.

EVAPORATORS.

Warren Evaporator Works, Warren, Ohio.
Blymyer Iron Works Co., Cincinnati, Ohio.

EVAPORATORS FOR MAPLE AND SORGHUM

The G. H. Grimm Mfg. Co., Rutland, Vt. & Hudson, O.

FARM WAGONS.

South Bend Wagon Co., South Bend, Ind.

FENCE MACHINES.

Richmond Check Rower Co., Richmond, Ind.
Lansing Wheelbarrow Co., Lansing, Mich.

FERTILIZERS.

Baugh & Sons Co., Philadelphia, Pa.

GARDEN IMPLEMENTS.

S. L. Allen & Co., Philadelphia, Pa.

GRAIN DRILLS, Etc.

Bickford & Huffman, Macedon, N. Y.

HARNESS.

Elkhart Carriage and Harness Co., Elkhart, Ind.

HARROWS.

The Bucher & Gibbs Plow Co., Canton, Ohio.
Gale Manufacturing Co., Albion, Mich.
Hench & Dromgold, York, Pa.
D. S. Morgan & Co., Brockport, N. Y.

HAY LOADERS.

The Farmers Friend Mfg. Co., Dayton, Ohio.

both pay very well if properly managed. A few locations can yet be homesteaded or bought from railroad companies. I have no land to sell, and therefore no ax to grind. I am a farmer, simply; I appreciate our need of more people and the climatic advantages of southern Oregon. A prune country is a perfect country, climatically. Prunes grow on trees, of course, but the prune-tree requires culture and attention as well as other fruit-trees. The Pacific coast needs 500,000 more men to produce enough fruits peculiar to the country to supply the markets of the United States. If this number who are now raising wheat and corn will give up that business and come west and plant orchards, much good will come of it. We will gladly welcome our proportion. So will our real estate men. Don't let them fool you; don't invest in acre lots at fabulous prices because they are near town. A prune orchard twenty-five miles from a railroad is just as good an investment as one five miles away, while the land will cost you only one fourth as much; you can get your prunes, when dried, to market easily enough. Some of the best prune orchards in this country are from twenty-five to forty miles from the railroad, and their owners are happy. Prices rarely go below the pay mark. Let 100,000 people come this summer.

Spikenard, Oregon.

S. M.

FROM MISSISSIPPI.—A sojourn of four months on the gulf coast has given time and opportunity to inquire and examine into its advantages and attractions, and also its possibilities of development. It is interesting and useful also to study the peculiarities and elements of climate, the temperature, rainfall, the character of prevailing winds, extremes of heat and cold, the mean temperature. All of these exert an influence on the growth of plants, as everyone knows, and determine the products and crops to which any particular locality is best adapted. Far too little attention is given to these matters, for they involve the profits of the farmer, fruit-grower and

HAY RAKES.

P. P. Mast & Co., Springfield, Ohio.
The Long & Allstatter Co., Hamilton, Ohio.

HAY TOOLS AND MACHINERY.

Oborn Bros., Marion, Ohio.

HORSE POWERS.

Minard Harder, Cobleskill, New York.
C. Aultman & Co., Canton, Ohio.
S. S. Messenger, Tatamy, Pa.

IRON FENCING.

Hartman Manufacturing Co., Beaver Falls, Pa.

LAWN MOWERS.

Chadborn & Caldwell Mfg. Co., Newburgh, N. Y.

MANURE SPREADERS.

Kemp & Burpee, Syracuse, N. Y.

MOWERS.

Stoddard Manufacturing Co., Dayton, Ohio.

PLOWS.

Oliver Chilled Plow Works, South Bend, Ind.
Princess Plow Co., Canton, Ohio.

POTATO DIGGERS.

Hoover & Prout, Avery, Ohio.
Frυν Potato Digger Co., Hoosick Falls, N. Y.

POTATO PLANTERS.

Aspinwall Manufacturing Co., Three Rivers, Mich.

ROAD MACHINES.

F. C. Austin Mfg. Co., Chicago, Ill.
American Road Machine Co., Kennett Square, Pa.

ROOFING.

Kanneberg Roofing Co., Canton, Ohio.

SCALES.

Osgood & Thompson, Binghamton, N. Y.

SPADING HARROWS.

Bryan Plow Co., Bryan, Ohio.

SPRAYING MACHINES.

P. C. Lewis, Catskill, N. Y.

THRESHING MACHINERY.

The O. S. Kelly Co., Springfield, Ohio.
Kingsland & Douglas Mfg. Co., St. Louis, Missouri.
The Huber Manufacturing Co., Mariou, Ohio.

WELL DRILLING AND PUMPING MACHINERY AND TOOLS.

Novelty Iron Works, Dubuque, Iowa.
St. Louis Well Machine & Tool Co., St. Louis, Mo.
Williams Bros., Ithaca, N. Y.

WELL DRILLING, HAND AND POWER PUMPING MACHINERY.

The American Well Works, Aurora, Illinois.

WHEELED AND RIDING PLOWS.

Deere & Co., Moline, Ill.

WINDMILLS.

The Springfield Machine Co., Springfield, Ohio.
Perkins Wind Mill Co., Mishawaka, Ind.
U. S. Wind Engine and Pump Co., Batavia, Ill.
Aermotor Co., Chicago, Ill.
Stover Manufacturing Co., Freeport, Ill.

WIRE FENCE.

Sedgwick Bros. Co., Richmond, Ind.

WOOD FORCE PUMPS.

C. G. Blatchly, Philadelphia, Pa.

other section now inviting immigration. The temperature in winter rarely sinks to the freezing point or rises to 90° Fahrenheit in summer. Cooling breezes prevail during the summer months. The annual rainfall is about fifty inches, and is quite evenly distributed throughout the year. An Illinoisan, an intelligent and educated man, says there is no place he has ever seen where the winters are so agreeable and the summers are so delightful. The sea-bathing, boating and fishing afford healthful recreations that are highly enjoyable. The fishing is unsurpassed. There are specialties in the way of products which are perfectly at home in the soil and climate of the coast, from any one of which a good living can be made—poultry and eggs, the Scuppernong grape and its wine, the pecan nut, and several other things. But a few of these together, so as to have several to depend on, will, in a few years from planting, make a man independent. I shall be pleased to answer any inquiries about this section that any of your readers may desire to make.

Ocean Springs, Miss.

T. H. G.

FROM MARYLAND.—With proper care, fruit will pay better than anything else a farmer may undertake in Maryland. Almost all known varieties of peaches can be raised with success, and pears and apples, too. Within six miles of here a prominent official of the agricultural department raised pears that took the premium away from California fruit, both for quality and appearance. The facility with which one can possess himself of "broad acres" suitable for fruit-growing, in Prince George's county, is shown by a recently printed brief description of fifteen of the best bargains in land to be found anywhere. These fifteen pieces vary in size from 90 to 850 acres, and comprise about 5,500 acres, all lying near together, between the Washington and New York lines of the Baltimore and Ohio and the Pennsylvania railroads, and only two to three miles from stations eleven to eighteen miles from Washington. They are offered for sale at \$10 to \$15 per acre. These lands are mostly without improvement, though some have small houses; most have more or less fine timber. The soil is adapted to the cultivation of early vegetables and fruits, and heavy enough for successful growing of cereals; all high and rolling, naturally well drained and perfectly healthy. The history of these lands and why they are mostly unoccupied can be told in a few words: Slavery and tobacco. Now, all they need to bring them up to a high state of cultivation and profit is intelligent, energetic labor and capital. It is surprising what beneficial effect an application of lime has on the soil. One of the most prosperous counties of Maryland is Montgomery, adjoining Prince George's, which comparatively, a few years ago, was badly run down and depressed until farmers found out that lime brought the land up again. If these lands were thoroughly advertised in the FARM AND FIRESIDE there might not be as great a rush for them as for those in Oklahoma, though with reason there might be; the probabilities are, however, they would all be sold before long to men who know how to make farming and fruit-growing pay. Some day the tide of immigration will turn strongly this way, though it has not yet. The population is almost entirely American; the Germans and Scandinavians are hardly seen at all. Only occasionally a new settler comes in, generally from Pennsylvania or near by. Inquiries come from prairie farmers, asking if the land will raise grain, that seeming to them to be the only test whether it can be made profitable, ignoring the possibilities of larger money in fruits. One writes that he doesn't want to come down here to raise watermelons, he wants to raise grain, his idea seeming to be that seed must go in every year to raise a crop. This is very different from the land owner who, from two hundred chestnut-trees and about three hundred walnut and butternut trees, says his income, year by year, is larger than that of any farmer cultivating three hundred acres of ground. He sells his crop on the trees for cash, and his only expenses are for taxes. Grain can be raised here the same as in Pennsylvania and Ohio, but not on a big scale like in Dakota. The best paying crop is fruit. On just such land as this, sixty acres of peaches made an average of \$12 per acre the third year from planting, \$30 the fourth, \$47 the fifth, \$400 the sixth, \$380 the seventh, \$235 the eighth; the net average over freight, picking, boxes and all expenses being \$125 per acre each year. This is better than grain ever did. An instance was told at the last meeting of the American Pomological Society, held in Washington last fall, of a man on just such land, who cleared more money in the three weeks of his cherry season than he formerly did in a year's hard labor in his tobacco fields. Another instance is told of a choice acre of peaches, not very far from here, that brought in \$800 one year. This was a very remarkable result, and one not to be calculated on; it is only quoted to show that the possibilities are much greater in fruit than in grain. The selection of a convenient location for fruit-growing is very important to success. Located between these two great competing railways, the markets of Baltimore, Philadelphia, New York, Boston, Pittsburgh and Cincinnati are easily accessible, and Washington is so easily reached by wagon that it is not necessary to ship by rail.

Riverdale, Md.

G. I. J.

Our Farm.

NOTES FROM MY HOME GARDEN.

BY JOSEPH.

ONIONS, TOMATOES AND POTATOES.—The old rule holds good yet. Whenever a crop is abundant and prices are low, farmers drop it for something else, and when, consequently, that crop is neglected, in small supply, and bringing a big price, all rush into it and again produce an over-supply. This is an old story. Writers have tried for many years to impress upon their readers the plain and undeniable fact that the best time to plant a certain thing is when that thing is cheap and in heavy supply. Evidently these teachings have not yet made much of an impression. The hop growers have gone through this experience time and again, and with many other crops it is the same thing. Whenever prices are especially high the temptation is too great to be resisted, and planting is done on an extensive scale. Disappointment follows, as a rule.

The present season will give us several illustrations of this tendency to scale the planting according to prices obtained for last crop. Onions were not over plenty last year and prices were quite fair. The result is that everybody seemed to be bound to plant just as much land in onions as he could get in suitable condition, and much is planted that was *not* in suitable condition. Prof. Green, in a recent number of FARM AND FIRESIDE, hit the nail on the head, I think, when he said that "somebody will lose money in onions this year." I have unimpeachable proof that planting done in onions this year is the heaviest for years. My own planting, fortunately, is not above a third of an acre, and I shall manage to sell my crop to good advantage anyway, especially since I planted largely of white onions, which will not be over plenty. I shall try hard, too, to get the crop into market quite early, even if I have to pull them before they get their full size. A dollar a bushel in August is better than fifty cents in September or twenty-five cents in October. If any of my friends can profit by these hints, I have no objection.

Now, let us take the case of potatoes. The crop last year was large and prices low. Thousands of bushels, probably, were left unsold, fed out or wasted. This spring was just the right time for planting. Seed was cheap, to be had almost for a song. But, apparently, the planting is light, especially of early and fancy sorts, and I shall not wonder if prices would be pretty well up for this year's crop. I anticipate heavy planting, with stiff prices for seed potatoes, next spring.

The case was similar with tomatoes. Last year the planting was heavy. Besides, there were all kinds of fruits and vegetables in greatest abundance, making the demand for tomatoes naturally smaller. There is considerable inter-relation between the tomato and fruit crops. It is a vegetable that can serve in the place of tree and bush fruits to quite an extent. When fruits are scarce, tomatoes are usually in great demand, and *vice versa*. Last summer the demand for good, ripe tomatoes was much less on that account than for many years past. Tomato growers got pretty much discouraged, and the planting this year, especially at the North, appears to be light. With a heavy fruit crop, such as we expect at this writing, the tomato crop will probably be sufficient to meet the demand, without a great deal to spare. But should the fruit crop yet fail us on account of late frosts or blights, or for other reasons, I think there will be a great demand for tomatoes. In our calculations about the prospective onion and potato crops we are less dependent on season and emergencies than with those about the tomato crops.

ONION SEEDLINGS DYING.—I have had much complaint about the young seedlings in hotbeds turning yellow first at the tip end and gradually wasting away and dying. The plants in one of my frames acted in the same manner last season. I believe that the cause is somewhere in the soil. I had mixed a considerable quantity of coal ashes and other materials with the earth of that particular bed. Perhaps the bed was too cold and wet underneath. This year I used a mixture of sand, rich, mucky soil and

fine compost, and the plants grew nicely and satisfactorily, especially with moderate bottom heat. Still, I confess, I am somewhat at sea concerning this trouble, and would be glad to have an explanation.

GROWING MUSHROOMS.—A reader of FARM AND FIRESIDE purchased a lot of mushroom spawn this spring, but does not know how to plant it. I bought two lots of spawn last fall, and planted it in a well-prepared manure bed; but both samples proved to be without life, and I had my labor for my pains. I hope this will not be the case with our friend. Growing mushrooms is not such a simple matter, as they are grown mostly in beds of specially-prepared, fermenting horse manure. The time to begin operations is in September, and at the proper season I will write up an account of the proceeding. But usually the seedsmen give brief, printed directions with each package of spawn. These are sufficient to give a person at least some idea of how the crop is managed. In the meantime I advise my friend to make a trial with open-air culture of this vegetable, which can be easily done, provided he has a rich old pasture, an old cow-yard or something of this character. Don't attempt this thing in a rich clover or timothy meadow. About the middle of June take spawn and spade here and there in especially rich spots; lift up the sod, place a piece of spawn of the size of a butternut or larger under it and replace firmly. If the season is favorable, especially uniformly moist and warm during September and October, you will, perhaps, be rewarded by some good mushrooms during the latter month. You are liable to make a failure of it, but it is worth the trial anyway.

WHAT SOD IS GOOD FOR.—The question is often asked, "Can trees or shrubs, etc., be planted in sod with success?" Yes; sod is first-rate, provided, however, that it is *dead* sod, sod root side up. Decayed or decaying sods are most excellent plant food. That is why we prefer clover sod for potatoes, corn, etc. But don't think any kind of tree or shrub will flourish when surrounded by living sod. To dig holes into grass, a foot or two wide and deep, and set trees, etc., in them, is labor lost. If you have trees or shrubs thus planted, go at it at once and dig away the sod for at least three or four feet all around the tree or shrub, or apply some good, rich compost and spade it in. Don't allow the grass and weeds to again encroach upon this territory. Well-decayed sod is also a fine thing for beds and potting-soil. Now is your time. Pare off the surface from a piece of rich, old pasture, pile the pieces of sod up, grass side down, to a thickness of several feet, and occasionally saturate the heap with liquid manure. In this way you can get plenty of the very best soil for potting plants, hotbeds, greenhouse use, etc. For roses, nothing will be found superior to the clear rotted sods. For other plants, and for general use in hotbeds and cold-frames, some well-rotted old manure and a portion of sharp sand may be added. When spring comes we are often at a loss where to get soil for our beds, simply because we have neglected to provide a supply in proper season. Now is the time to get the sods and put them up to rot. Later, we can get the other materials, mix and fork them over from time to time, and at last store them out of reach of frost, so we can get them when wanted in spring.

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

PROTECTING PEACH-TREE BUDS.

BY SAMUEL B. GREEN.

Experiments for protecting the fruit buds of peach-trees from winter injury have been made for several years at the Massachusetts Agricultural College, and for four years past in the early winter the roots of several of the trees have been loose on the north and south sides and laid over on the ground. In this way, if the roots are cut off in early summer, the growth will be forced into the roots on the east and west sides, and these will be simply twisted a little in the process of bending over. The trees are bent to the south to avoid the direct rays of the sun on the trunk and main branches.

In the first experiments the buds were injured by heat because the trees were covered too closely. Latterly it has been

the practice to cover the branches with mats, corn-stalks or other light material, and a large percentage of the buds have been saved. This spring it is found that while about fifty-two per cent of the fruit buds are destroyed on unprotected trees, those which were protected show only ten per cent destroyed.

Many of the trees treated in this way are more than ten years old, yet they are easily lifted to an upright position in the spring, grow well and mature a crop.

No covering should be put on the ground under the trees, as some moisture seems necessary to keep the buds in best condition, and if the land is in sod or infested with mice, the trees should be sprayed with skim-milk and Paris green, to protect from the mice. Trees covered with soil have frequently been injured even in Minnesota, and there it is found the best practice to cover with corn-stalks. To protect the wood from fungus, which occasionally injures the trees during warm weather in winter, and also from mice, it would be a good plan to spray the trees with Bordeaux mixture containing some Paris green.

INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

"French Locust."—J. E., Newport, Ky., writes: "What is the botanical name of the tree that bears the fruit called 'French locust'?"

REPLY:—Please describe the tree you refer to under the name "French locust." In doing so, give size and form of the leaves and fruit, color of flowers; also state whether it has thorns. I cannot find any tree referred to under the name which you give, and think it a local name.

Grafting Seedling Apple-trees.—S. S. M., Hale, Oregon. Apple seedlings from seed sown this spring should be fit to root-graft next winter, if they grow reasonably well this year. By root-grafting I mean that the roots should be taken up in the autumn and grafted under cover in the winter and planted out in the spring. This is the common way to handle them, but they may be grafted where they stand in the rows, next spring. It is always best to graft seedlings below the surface of the ground, for the place where the union is formed, which is often tender, is thus protected. Seedlings as large as a lead-pencil in August or September may be easily budded, and will make good trees for your climate when thus treated. See article on budding in last issue of FARM AND FIRESIDE.

Evergreen Hedges, Trimming.—A. C. W., Hugo, Ill., writes: "Where one is growing a spruce evergreen screen and wishes uniformity in height, how should those specimens in the row be managed that are rapidly outgrowing the rest? If the main central leader is cut back, when should it be done, and will it change the form of such tree so it will not resemble the rest? Can weakly ones be manured?"

REPLY:—It would probably not be best to attempt to check the strong-growing trees, but to keep the screen of even height by encouraging the growth of the shorter ones. This is best done by improving the soil around them. A good way to do this is to dig a ditch one or both sides of the weak trees, far enough away so as not to injure the roots, and fill it with rich leaf-mold or well-rotted cow manure. Large, well-established spruces and other conifers are as much benefited by such manuring as the deciduous trees. If the trees are checked because the land is too dry for them, it would be a good plan to mulch them with leaves one foot deep, besides putting in the manure. If you wish to prune them, the month of May or first of June will be found a good time to do this.

Gift Packages for Berries.—T. C. M., Princeton, N. J. It seems to me that no one who has ever used the gift packages would willingly return to the old way of trying to get crates and boxes returned. I have now used the gift packages for all kinds of fruit for four years, and find them rather more profitable than the return package, and I do not have the annoyance of hunting my "empties." I can buy 24-quart filled cases with covers for nineteen cents each, of a neighbor who has a machine for making them. I find that my fruit brings enough more money in these nice, clean boxes to pay for their cost. Buyers do not want to bother to return boxes, and dealers likewise prefer the gift package. In a market where berries are sold in return packages, the seller who first introduces the gift package always has the advantage over his competitors. The material for these boxes can be bought very cheap, all ready to be put together, and a supply of cases can be easily made up at odd moments, if one has a machine, which costs only about five dollars. Where sales are made in a local market, the empty cases can generally be bought of the dealers for very little.

Current-worms—Rose-bugs—Kerosene Emulsion.—M. W., St. Paul, Minn. The current-worm may be destroyed by dusting the bushes with powdered white hellebore as soon as the first worm is seen. If by late in the season you mean August, and you wish to know why the leaves fall in August, it is a very different matter. The early falling of current leaves in July or first of August is generally due to the injury of the foliage by some fungus. This may be prevented to a great extent by spraying the foliage, after picking the fruit, with a solution of one fourth of an ounce liver of sulphur to a gallon of water.—I am very sure that you do not have the true rose-bug at St. Paul, but that you refer to some aphid or thrip which makes the leaves turn brown and become unsightly. These may be destroyed by syringing the foliage every few days, when the pests are most abundant, with kerosene emulsion made as follows: To one quart of soft soap (or one fourth pound of hard soap) add two quarts of boiling water and one pint of kerosene. Agitate until the kerosene unites and forms a perfect emulsion with the soap; then add two gallons of water, and the emulsion is ready for use. This emulsion will keep for some time, but if it is found to separate on standing, the soap and kerosene will unite on being warmed and agitated again.

Rose-bug on Grape-vines.—C. L. H., Holden, Mass. The only practical ways to get around the rose-bug pest are by covering the vine with mosquito-netting, picking off the bugs or bagging the blossoms. The latter is the

most practical way, and it need not be very expensive, either. Some growers estimate that bagging, under this system, does not cost over one quarter of a cent per pound; the work can be done by children. One-pound size ordinary paper bags should be used; they may be drawn over the cluster and then pinned over the cane on which the bunches grow, or they may be fastened around the stem with a short piece of wire. For such early bagging as is necessary to protect from rose-bugs, I prefer the former method. There are a few varieties of grapes that are deficient in pollen, such as Brighton and several of Rogers' hybrids, and these should not be bagged in paper before blossoming. For these latter kinds, bags may be made of mosquito-netting or thin muslin. Grapes raised in bags are not injured by rot, are free from spiders' webs and dust, and of finer color and bloom than those not bagged, but on the other hand, the skin is thinner and is more liable to crack when they are handled. Bagging is also a good protection against early frost in autumn; and if the bunches are laid away in bags they keep well. In connection with the distribution of pollen, it occurs to me that you might be interested in the fact that the pollen of some plants will pass readily through common cotton cloth, such as flour-sacks are made of. In some experiments carried on two years ago, it was repeatedly shown that corn-silk covered with sacks made of such cotton were fertilized and produced fairly full ears of corn.

Hickory-nuts—Basswood from Cuttings.—K. H., Nerstrand, Minnesota, writes: "Where can I get pignut hickory-nuts in large quantities for planting? Can this hickory be grafted successfully? If it can be, it is an easy way to get trees. I planted a few nuts one fall, but they failed to grow. I concluded they were hard to grow, or the nuts planted lacked vitality.—Will basswood grow from cuttings? If they can be so grown it would be a great thing for western farmers."

REPLY:—I do not know, but think inquiry through some of the nurserymen would lead you to finding some locality where there are pignut-trees that fruit heavily. The pignut and all other hickories are very difficult to graft, but it is often done to propagate the thin-shelled, valuable kinds of the shellbark hickory. I think they are not difficult to grow from seed. However, the seed should not be allowed to get dry, but should be wintered in a pit or box of loose soil or sand where they will freeze hard, and then be planted in the spring. If planted in autumn, gophers or other vermin generally destroy them before spring.—The American basswood, or linden, can be grown from cuttings or layers, if care is used in handling them. If they are to be grown from cuttings, the wood—not over two years old—should be cut up in the autumn and carried over winter heeled in in dry land. They should be set in moderately moist retentive soil early in the spring, with the soil compacted firmly around them. If to be grown from layers, the branches to be layered should be slightly twisted so as to crack the bark where covered with soil. Where basswood stumps have sprouted and grown one year, the base of the sprouts will generally send out roots if covered six inches or so with soil. These may then be broken off and planted out. But plants grown by either of the above methods are inferior in vitality and longevity to plants grown from seed. The seed is rather difficult to germinate unless sown as soon as ripe, and even then sometimes requires two years before it will grow. The seedlings may be bought of nurserymen at about \$6 per thousand.

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LIFE'S LOSSES.

Upon the white sea sand
There sat a pilgrim band,
Telling the losses that their lives had known,
While evening waned away
From breezy cliff and bay
And the strong tides went out with weary moan.

One spoke with quivering lip
Of a fair freighted ship,
With all his household in the deep gone down
But one had wilder woe,
For a fair face long ago
Lost in the deeper depths of a great town.

Some spoke of vanished gold,
Some of proud honors told,
Some talked of friends that were their trust no more;
And one of a green grave
Beside a foreign wave,
That made him sit so lonely on the shore.

But when their tales were done,
There spake among them one,
A stranger, seeming from all sorrow free;
"Sad losses have ye met,
But mine is heavier yet,
For a believing heart has gone from me."

"Alas!" these pilgrims said,
"For the living and the dead,
For fortune's poverty, for love's sore cross,
For the wrecks of land and sea;
But, however it came to thee,
Thine, stranger, is life's last and heaviest loss."

AN OVERCOAT TRAGEDY.

HE had promised him that she would mend the lining of his new overcoat if he would wear another and leave that at home. And so, as he left it, she took it from the hall and carried it into her boudoir.

Her name was Eve Wilton, and she had been married five years, and never, never, never in all that time had one unhappy moment. Mr. Wilton had been very attentive, very kind, very generous, and had never made her jealous. She often said that she was the happiest woman living. Now, as she looked at the lining and compared the silk with which she was about to replace the torn portion, she was thinking these thoughts. They had never had any children, but when people are all in all to each other, that is no very great grief. All her care was for him, all his for her.

"And he is just the dearest, best, truest fellow in the world!" said Eve to herself. "I'm not half good enough for him. I wonder what this is in his pocket; it bulges it all out of shape."

She put her hand into the breast pocket as she spoke, and drew out a little package wrapped in paper and tied with blue ribbon.

"Something he has bought for me, I expect," said Eve. "I wonder what it is. I think that I won't open it until he comes home."

She laid the silk across the hole, cut it out and basted it down.

"I wonder what it is," said she. "Tom did mean to get me an opera-glass, I know; but that is not the shape of the parcel. It doesn't seem like a book. It might be lace wound on a card, real lace."

She looked at the package again.

"I do wonder what it is," and then hemmed the patch down. "There wasn't much to mend, after all. I thought the tear much longer. He caught it on a nail in the office, I know. Now, I do wonder what is in that package."

Eve put the coat over a chair and took up the parcel.

"Tom won't mind," she said. "I will just take a peep. I'm sure it's for me."

Then she undid the ribbon, unfolded the paper and saw letters.

"Dear Tom! He keeps my letters next his heart, and he has never told me."

But the writing was not hers; she saw that at a glance.

"His mother's letters," she said. "He loved his mother so."

Then she began to tremble a little, for the letters did not begin with "My dear son," nor with anything like it. She cast her eyes over them. They were love letters.

"Tom has loved some other woman before he met me," she said, beginning to cry. "Oh, what shall I do?" Then she cried out, "Oh, foolish, foolish creature that I am! Of course, she died, and he only loves me, now. It was all over before we met. I must not mind."

But here she paused, gave a scream, and then threw the letter from her as though it had been a serpent and had bitten her. It was dated in the previous week. It was not four days old.

"Oh! oh! oh!" cried Eve. "Oh, what shall I do? Oh, where shall I go?"

At every cry a thought pierced her breast like a stab.

"Tom, my Tom! What shall I do? Tom! Tom! He to be false—Tom! Oh, I have gone mad! No! There they are. They are really there—those letters. Why do I not die? Do people live through such things as these?"

Then she knelt down on the floor and gathered up the letters and steadily read them through. There were ten of them. Such love letters! No other interpretation could be put upon them. They were absurd love letters, such as are always produced in court in cases

of breach of promise. And they called him "Popsy Wopsy," "Darling Darling," "Lovey Dovey," "Own Sweetness" and "Angel of my Soul," and they were all signed, "Your own Nellie."

"It is all true," said poor Eve, wringing her hands. "And it is worse than anything that I have ever heard of. I trusted him so, I believed in him so. My Tom, mine!"

Then she wiped her eyes, gathered up the letters, wrapped the silver paper about them, tied the blue ribbon, and put them back in the awful breast pocket of that dreadful overcoat, and hung it up in the hall again.

"Tom shall never know," she said. "I'll not reproach him. I will never see him again; when he comes home, I shall be dead. I will not live to bear this."

Then she sat down to think over the best means of suicide. She could hang herself to the chandelier with the window-blind cord; but then she would be black in the face and hideous. She would drown herself; but then her body would go floating down the river into the sea; and drowned people looked even worse than strangled ones. She was too much afraid of firearms to shoot herself, even in this strait. She would take poison. Yes, that would be best; and though she should never see Tom again, he would see her, and remorse would sting him.

Here she made a great mistake. A man who is coolly treacherous to women never has any remorse. Remorse in love affairs is a purely feminine quality, and even the worst of the sex are not without it. However, it is natural to believe that remorse is possible to a man whom one has believed to be an angel in human form, and Eve took a little miserable comfort in the thought that Tom would kneel beside her coffin and burst into tears and passionate exclamations of regret, which she perhaps might see from some spiritual point of observation.

So, having put on a hat and thick veil, Eve betook herself around the corner to the nearest drug store. The druggist was an old German, a benevolent looking one, with red cheeks and a smiling mouth; and when she asked for poison for rats, he said "So!" and beamed mildly upon her.

"I want it very strong," said Eve.

"So!" said the druggist.

"But not to give more pain than is necessary nor turn the face black," said Eve.

With a grave face, he compounded a powder and handed it across the counter. Eve took it, handed him the few cents he asked, and walked off. Once at home, she went straight to her room and undressed herself and retired to bed, taking the powder with her. Once or twice she tasted it with the tip of her tongue, hoping that it was not very disagreeable. Then, finding it sweet, she bravely swallowed it.

"It is over," she said. "Oh, heaven forgive me and forgive Tom." And then she laid herself down upon her pillow.

Just as she did so, the familiar sound of a latch-key in the door below startled her. Tom never came home at noon, but there he was now. No one else but Tom would walk in in that cool way, and he was calling her.

"Eve, Eve, Eve, where are you?"

Never before had she refused to answer that voice. Why had he come to torture her dying moments? Hark! Now he was bounding up the stairs; he was in the room.

"What is the matter? Are you ill?"

"No," she said, faintly, "only tired."

"Ah, you look tired, little one," said he. "I came home to get the overcoat. I suppose you have found out by this time that the coat in the hall is not mine. I wore Johnson's home from the office last night by mistake; he is anxious about it. He asked me if there was any one in the house who would be likely to meddle with papers in his pockets. I said that I thought not, I hadn't a jealous wife—eh! what's the matter, Eve?"

"Oh, Tom," she cried, hysterically. "Oh, say it again! It was not your coat? Oh, Tom, kiss me."

"Why, what is the matter?" cried out Tom. "You must be ill."

Then Eve remembered all.

"I am a wicked woman, Tom. There were letters in the pocket—love letters. I read them. I thought you were false to me. I—I took poison, Tom. I'm going to die, and I long to live so. Oh, Tom, Tom, save me!"

"Yes, yes," he cried. "Oh, good heaven! What poison?"

"Hoffman will know. I bought it of him. Perhaps he can save me," cried Eve.

Away went Tom, white as death, to the druggist around the corner. He burst into the shop like a whirlwind.

"The lady," he gasped, "the lady who bought poison here an hour ago! She took it by mistake. Can you save her? Is there an antidote? She is dying!"

"No, no," said the old German. "Be calm, be at rest. No, no, she cannot die of dat. When a lady asks me for poison dat will not turn a rat black in de face, I say to myself, 'So!' I smells somesings, and I give her in de paper a little sugar and somesings. She could take a pound. Go home and tell her so. I never sells poisons to womens dat ery and do not wish de rat to become black in de face. So, be calm."

So Tom flew home again, and Eve rejoiced, and hearing that Johnson was a bachelor who admitted himself to be engaged, she did not rip off the patch, as she had at first intended to do.

AN INCIDENT OF MEMORIAL DAY.

The ranks of white-robed school-children had wound away down the path to the sleepy street; the blue-clad veterans, with subdued pride, had carried off the scarred old flag, its precious folds caught in the long streamers of crape; the slowly receding strains of the last dirge were borne back on the soft evening air like a tender sob pulsating gently to the place of the dead.

Only a few black-robed women and a little group of old soldiers—this one minus an arm and that one leaning heavily on his worn crutch—remained in the little graveyard, and soon they, too, departed, leaving only two persons, a bent old mother in a distant corner, and a tall, stately woman, standing as if waiting, in the deep shadow of a gloomy pine.

It was the most peaceful, the most neglected, the most lovely spot on earth. Nearly every stone had a flag or a sword cut in its face, and each name bore after it the 12th—volunteers.

At first the most solicitous care had kept the mounds smooth and the paths open, but time had gone by, and now each grave had sunk to a hollow trench, down whose sloping sides the long grass trailed, and the stained marble slabs had long ago broken; the vines, once planted by tender hands, had reached caressingly out and bound all in impartial embrace; flowers forgot where they had stood originally, and tall trees looked out upon the once young shrubs, now bidding fair to rival the old ones.

This evening each narrow grave bore a tiny flag and its load of blossoms; men long since forgotten at all other times were hunted out and honored on this one day of the year by offerings from the hearts and the hands of their old comrades; a sweet odor of fading flowers filled the warm air, and a soft, golden afterglow tinged the tips of the pines and a gentle breeze waved the little flags standing loyal and true even in their humble places.

When all had left, excepting the sobbing mother in the farthest corner, the tall woman stepped out and quickly picked her way over the thick-leaved plants and tangled vines to a long grave at the foot of the hill. Here, also, was an air of the absence of human care, and yet it seemed happier and truer in its transition back to nature. It was only a part of the harmony of the place for its stone to be lost under a large, wayward rose-bush; a closely-cut sward would have been a cruel discord.

The woman slowly knelt, laid aside a little black bonnet as if to let the slowly stirring air cool her hot forehead, and reverently bent her lips to the grass above the head. The last rays of the sun stole softly up and fell tenderly on her face and lighted it, showing eyes beautifully sad and patient, a mouth wonderfully sweet and a low, fair forehead, from which were brushed back wave upon wave of soft, snowy hair. White hair will soften and hallow any face, but here it seemed a crown, a halo for one as pure and lovely as a saint. But even its silver did not deceive one; there was a certain youth, in spite of the look of suffering, that kept one from judging her as old—a youth borrowed, perhaps, from the youth in which she always lived, if one might guess by the pleading, dreamy eyes.

From the country, stretching away behind her, came the far-off lowing of cattle, and from the town the strains of that same dirge, faint, but yet filled with a sense of awful pain. She put her hands over her ears and still knelt, while her face grew paler, and the shadows of the pines near by cast their black cloaks about her; the silence, the loneliness, the sentiment of the place overpowered her and she started to her feet. But recovering again, she took from a basket great, loose, creamy roses, and heaped them about a tiny cotton flag, and seemed to ponder till a big tear slowly rolled down each cheek and a sob convulsed her shapely shoulders. She threw herself on her knees again, with her face in her hands, while the sun sunk, and the solemn, almost weird music thrilled softly but clearly about her.

Hers was not an unusual romance of that time. She had merely loved, and her love had not returned to her at the final muster-out. The grave by which she now stood, however, was not that of the lover, for she did not even know that he was dead. All that she did know was that the two brothers, Charles and Herbert Milford, had marched away side by side; she had loved Herbert, but they had never spoken of it, so he left; Charles came back to die, and she was now at his grave; but she never knew where Herbert was, and—she could never forget him. Thus the grave of the brother had become to her a place of all purity—a communion with the dear, dead past—and where she went to kneel at the shrine of her old love.

Twenty-five years had gone by and her heart had not changed. So, as she sobbed there in her holy of holies, she did not note how even the faithful mother had gone, and how the calm white moon had slowly climbed up and was pouring its gracious benediction over each little flag-marked bed, seeming to say:

"Sleep on, oh, weary soul! Thy summons have not yet come."

A man came slowly up to the open gate of the graveyard—a man of probably fifty, yet his face was older than his walk would lead one to expect. His head had fallen on his breast and he walked slowly, as if in a reverie.

It seemed so good to get back again to the home which he had last seen through a mist of tears as he had waved his cap and pointed proudly to the gay, new flag twenty-five years before.

His had been a busy life since, and he smiled a little once, saying to himself that he was growing sentimental when he, the president of a mammoth manufactory in the East, had stopped off at this little western town just because the sight of it as he was passing through had brought up his boyhood and memories of a certain dark-eyed girl who had, after all, loved his brother, as some one wrote him when Charles had died. No, he didn't care now whom she loved. Only he had hoped that she had loved him a little then. But now, now; why he hadn't any heart now. "It's all turned into stocks and gold," he laughed a little to himself, as he patted his broad chest. However, the laugh was not a very hearty or satisfied one, after all.

Thus he argued to himself as he went on, following the directions given him by a boy in the town, and stepped cautiously about to the place at the foot of the hill. The old score had died out and the world was forgotten; he lived again the days of his youth, and loved his brother and drew his life from the eyes of one young girl.

So he continued, until at his feet he saw a figure lying with the arms thrown out over the pale roses, and with the calm face turned full to the moonlight. He noiselessly stepped nearer and bent above her. Her low, regular breathing showed that she was sleeping, and a teardrop gleamed like a diamond on each dark lash. He knelt and brushed the grass from the face of the stone and read.

"CHARLES MILFORD."

"It is she," he murmured. "She did love him, and thus she comes to him."

Long and earnestly he looked at her quiet face, like an angel's in the white moonlight; then, gently, noiselessly, he bent and pressed his lips to her snowy hair. Just for a moment, when he sprung up and hastened away as if guilty of some crime, laughing nervously through his white lips, as he whispered:

"She is his wife, and has no thought of me. I will go back to the world, for even the world is never so false as a woman."

While she, a little later, awoke with a cry at finding herself alone so late in this beautiful, awful waste, and ran wildly out to the street, her white hands pressed to her throbbing temples, while her cold lips quivered, and a cry like the cry of a wounded bird rose to them.

"I slept, and dreamed that Herbert came to me and kissed me. Oh, why was it all a dream?"

Angels of mercy are always hovering over us, but sometimes they only flutter near to us, instead of covering us safely in the loving protection of their wings.

PASSING THINGS ON.

The old saying is, "Keep a thing seven years and you will find a use for it;" but there are limits in the keeping of things beyond which it is not well to go. On this point the *American Cultivator* has a few suggestions worth noting:

The most pernicious habit in the world is the habit of saving every article, scrap, piece and bit of stuff in general, with the feeling that sometime, somewhere and somehow it may be of use. By virtue of fidelity to this undefined conviction, drawers and attics and closets become filled with old rubbish and accumulations, trash and stuff that are of no earthly use to a human being; that attract moths and mice, and all the domestic pests that are a burden and a weariness to handle and sort over every now and then, and are, indeed, simply worse than useless.

The true way is to apportion. The moment a certain thing is unfit for a specific use let it be given to the person who can use it. There are always to be found people who have the time and patience to mend, make over, repair, and who must make this time and handicraft serve in lieu of money; and to those persons should go all such wares. For people whose time has a value beyond that of repairing and refitting, it is worse than folly for them to waste it in such way. Where life is on a fairly well-to-do scale, it is always better to buy new and give the old to those to whom it may be of service while it is yet good enough to be of service.

To hoard things against a possible time of their being wanted is idle. The time will never come. Fabrics go out of fashion, or they are cut in a way to make changes impossible, or they cannot be matched with new material, or they are not worth putting with new material. The same truths apply more or less to all household articles. It is idle and useless to store them. Passing things on is the law of life.

FOR SCROFULA

and for
the cure of all
scrofulous diseases,
the best
remedy is
Ayer's Sarsaparilla
Cures others, will cure you

THE RED CROSS.

Inasmuch as the Red Cross is a work of international applied Christianity, having the whole world for its field and its operations, such as to bring it often within the purview of these columns, the reader should have a brief and clear statement of what it is.

The name, the "Red Cross," came very naturally from the flag of the society, which is a red cross in a white field. This flag was adopted out of compliment to Switzerland, the flag of which is a white cross in a red field. The organization originated in Switzerland.

The decade of 1860-70 was a war period both in England and America. In the autumn of 1863 the American Christian Commission, which was then in successful operation and accomplishing immense good in the amelioration of the horrors of the American civil war, attracted the attention of the good people of the peaceful republic of Switzerland, and a small meeting to organize for the same work in Europe was held in Geneva. This meeting called a convention of Switzers to meet in Geneva in August, 1864. This convention called an international convention to meet in Berne. The convention thus called was a success, representatives from every civilized power being present. As the result of four days' consideration, an international treaty of ten articles was drawn up, to be submitted to all the warlike powers for approval. Within four months from the engrossment of these articles, twelve European powers signed them, and now every power in the world, excepting only Mexico and Brazil, are parties to the treaty.

Until the treaty came for consideration by the United States, its work related wholly to ameliorating the evils of war. The flag of the Red Cross was to be respected wherever unfurled. It was to have care of the wounded and dead of both combatants in any battle. It had the right to secure the discharge and return to their homes of soldiers incapacitated by wounds or disease. It was to be the custodian of any aid given by either party. Its relief trains were to pass freely across all hostile frontiers. All the provisions of the treaty related to conditions of war. When the subject was finally acted upon by the United States government, an innovation was proposed; namely, that the Red Cross should have the right to extend its work in times of peace to the relief of sufferers from calamities of any kind in any country—such as suffering from fire, flood, famine, pestilence, shipwreck, as well as from war. This amendment was accepted by all the powers, so that now the Red Cross is able to concentrate upon any calamity in any part of the world the benevolence of the world; and any person in any nation can promptly and safely reach any object of charity anywhere through the agency of this international organization.

There is another great advantage. Miss Barton not long since stated it with a clear illustration: "The Red Cross society is like a man on a watch-tower, who keeps a lookout over the town for the signs of a fire. If he perceives a light, he watches carefully and anxiously to see if it develops into a blaze, that he may sound the alarm. So does the Red Cross society watch the horizon for the sign of any kind of danger that threatens to become national in extent, that it may sound the alarm and bring the nations of the earth to the rescue." The Red Cross was the first to perceive the oncoming of the Russian famine, and to reach the incredulous ears of the czar with the alarm.

This general but brief statement will make clear the nature and character of this international organization.—*The Interior.*

A JUST TRIBUTE TO WOMAN.

If it be true that "the corner-stone of the commonwealth is the hearthstone," how important is the task of every woman, even in that sphere of family life which many are tempted to despise as too narrow for their energies. Every woman should indeed aim at doing good in wider regions of life, and should endeavor by the irresistible force of sweet and silent influence, if in no other way, to raise the whole tone of national thought and conduct. But even if a woman, whether married or unmarried, be "never heard of half a mile from home," the purity and loftiness of her ideal, the devoted unselfishness of her life, may tell with immense and continuous power upon every member of her family. The bright, invisible air produces effects more stupendous when no whisper of a breeze is heard than all the fury of the passing hurricane; and the influence, conscious and unconscious, of thousands of women entirely unknown to fame, may go to the ennoblement of the moral beings of generations yet unborn. Men are, and ever will be, what their wives and sisters, and above all, their mothers, make them by influence which begins with the cradle and ends only with the grave.

TREATMENT OF THE EAR.

The human ear is a much more delicate organ than most people suppose. It is extremely dangerous to interfere with it by the use of ear-picks or any of the various instruments used for the purpose of cleaning it from wax. The wax is a natural secretion, and unless the ear becomes diseased, it does not accumulate any faster than is necessary to protect the passage from the entrance of insects and various particles which might otherwise be forced in and tend to interfere permanently with the hearing.

The greatest care is necessary in washing the ears of little children. They should be washed outside, but on the inside only so far as the finger, wrapped in a soft towel, will go.

The practice of forcing a hair-pin, or any other hard instrument, into the ear passage is fraught with danger of injuring the membrane, causing permanent deafness. Earache is a malady of childhood, and causes most distressing pain. The simplest remedy for it is to take a little cotton, dipped in warm sweet-oil, and put it in the ear passage.

A danger that may arise from doing so simple a thing as this is that minute particles of the cotton may be left in the ear. To prevent this, some physicians advise making a little wad of the cotton and wrapping it in the finest and thinnest linen cambric that can be found, and dipping this in warm sweet-oil. In case of intense pain, a few drops of hot laudanum or camphor may be used with the oil.

When foreign bodies get into the ear, they should be removed by syringing them out with warm water. To attempt to remove anything from the ear passage by forcing an instrument in is a rash thing for any one except an aurist to undertake. The best medical practitioners refuse to treat affections of the ear or eye, but send their patients to specialists.—*New York Tribune.*

WORTH THE TROUBLE.

Family anniversaries, or the celebration of them, occasion some trouble in the household, especially if there are no servants; but they pay for the effort involved. "This has been the nicest day I ever knew," said a boy to his mother, one evening. "The birds have all been singing, and the sun has shone every minute, and everything has been so lovely, just for your birthday, mamma, and I am so glad!" and he emphasized his gladness with a hearty hug and kiss. For weeks he had been looking forward to this day, planning and making a little birthday gift as a surprise, and when the time came, his whole mind was for making his mother happy. Everything that is desirable is attended with some trouble; but how can we keep our children contented and happy at home without taking trouble? And no mother regrets the trouble when she sees her children regarding their home as the very best place in the whole world. Try to celebrate the birthdays one year, and see if it does not "pay" in the enjoyment of the whole family.—*Waverly.*

WHAT A WOMAN CAN DO.

She can come to a conclusion without the slightest trouble of reasoning on it, and no sane man can do that.

Six of them can talk at once and get along first-rate, and no two men can do that.

She can safely stick fifty pins in her dress while he is getting one under his thumb nail.

She is as cool as a cucumber in half a dozen tight dresses and skirts, while a man will sweat and fume and growl in one loose shirt. She can talk as sweet as peaches and cream

to the woman she hates, while two men would be punching each other's heads before they had exchanged ten words.

She can throw a stone with a curve that would be a fortune to a base-ball pitcher.

She can say "no" in such a low voice that it means "yes."

She can sharpen a lead-pencil if you give her plenty of time and plenty of pencils.

She can dance all night in a pair of shoes two sizes too small for her, and enjoy every minute of the time.

She can appreciate a kiss from her husband seventy years after the marriage ceremony is performed.

She can go to church and afterward tell you what every woman in the congregation had on, and in some rare instances can give you some faint idea of what the text was.

She can walk half the night with a colicky baby in her arms without once expressing the desire of murdering the infant.

She can do more in a minute than a man can do in a hour, and do it better.

She can drive a man crazy in twenty-four hours and then bring him to paradise in two seconds by simply tickling him under the chin, and there does not live that mortal son of Adam's misery who can do it.

TRICHINOPOLY CHAINS.

A few of these treasures are preserved in the British museum, and also in the Louvre in Paris, exquisite examples of rare workmanship. The filigree artisans of India still continue making the beautiful round plaited gold chains for which their ancestors have been so famous. From some of these chains hang smaller ones of finest wire, almost like gold threads, having minute fishes and other pendants drooping from them. In the English and French collections of jewelry, still guarded as treasure gems, one may see ear-rings so dexterously wrought that from connecting pendant chains tiny birds covered with enamel "droop with shimmering beauty." In the British collection, among other rare things is a scepter, thought to be that of a Greek priestess, covered with plaited and netted gold wire.—*Harper's Bazar.*

THE ECONOMY OF THE EGYPTIANS.

A curious illustration of the domestic economy of the Egyptians has been met with in the unwinding of the bandages of the mummies. Although whole webs of fine cloth have been most frequently used, in other cases the bandages are fragmentary, and have seams, darns and patches. Old napkins are used, old skirts, pieces of something that may have been a shirt; and once a piece of cloth was found with an armhole in it, with seam and gusset and band finely stitched by hands long since crumbled and their dust blown to the four winds.

YOUR NEXT WASH-DAY WILL BE AN EASY ONE

If you accept our offer of a

FREE TRIAL PACKAGE OF FRANK SIDDALL'S SOAP.

No Scalding.

No Boiling.

No Rough or Sore Hands.

No Heavy Boiler to Lift.

No Unhealthy Steam.

No Yellow Clothes.

No Wall-paper Spoiled.

No Children Scalded.

No Fuel Wasted.

There is no need of having any of the disagreeable features of wash-day if you will wash your clothes the new way, and we are so anxious to have you try it that we got the manufacturer of the soap to agree to send each one of you a trial package, absolutely free of cost, on very easy conditions, and we don't want a solitary housekeeper to pass this offer by. The soap will not injure the most delicate fabric, but it will, if directions are followed, make your clothes clean and leave them sweet-smelling, and this without boiling a single article and with very little rubbing. Follow the directions sent with the soap, implicitly, no matter how odd they may seem. They are so simple and easy that you may be tempted to slight them. Send at once.

These promises must be plainly made or the soap will not be sent. It costs Mr. Siddall over thirty cents for each trial package of soap sent out, and he can only afford this when one package "converts" two families, as it invariably does in this way.

FREE HOW TO GET A TRIAL PACKAGE OF FRANK SIDDALL'S SOAP FREE BY MAIL, ALL CHARGES PREPAID. FREE

Write a postal card like this, filling in the blanks with your name and address, and also your neighbor's name.

Each lady who sends for this soap will also receive a pamphlet book telling of at least fifty other uses for this wonderful soap. With it in the house you need no other kind whatever for toilet or household use. It is adapted for all uses.

Tell all your neighbors and friends to send for the trial package. It will cost them nothing provided they make the promises. We want every woman in the country to try it.

I promise to use Frank Siddall's soap, if sent free, on the whole of my regular family wash, the first wash-day after I receive it.

Mrs. _____, a neighbor, has promised that she will come and see the washing done.

Name _____

Post-Office _____

County _____

State _____

Write your postal card as above and address it to **Publishers FARM AND FIRESIDE, Springfield, Ohio.**

Our Household.

AFTER TWENTY YEARS.

LOUISE LONG CHRISTIE.

With such reluctant, weary feet
I go to my daily work;
And yet I feel it is not meet
That any of it I should shirk.
I am met by the upturned faces
Of sixty children or more,
And to get them peaceably through the day
Will vex my soul full sore.

I always begin the day with prayer,
And ask God for especial grace,
And as I get through, the first thing I see
Is that scamp Johnny Brown's laughing face;

The mischief he brews is enough to do
For every room in the house,
And yet, when he chooses, he can be so good
And quiet, and still as a mouse.

I take up the lessons—they are so poor;
I watch the hands of the clock;
The principal opens the door and comes in—
Oh, dear, I wish he would knock!
For then I'd have time, by a look or a tap,
To quiet the worst of the boys,
But to open the door and come right in
Seems as if it were all noise—noise!

If they are busy, and their tongues are still,
Their feet keep moving around,
Till I'm sure they've as many as a centipede,
If I can judge by the sound.
Days pass into weeks, and weeks into years,
Till I often hold my breath,
And ask my God through bitter tears:
"Is there no way out—but death?"

We are expected to teach day in, day out,
For the "love of the work," they say;
But I guess, if the truth is known and told,
The most of us teach for pay.
Go on, young teacher beginning your life,
It seems very bright, though long;
But after you've taught twenty years or so
You'll sing a different song.

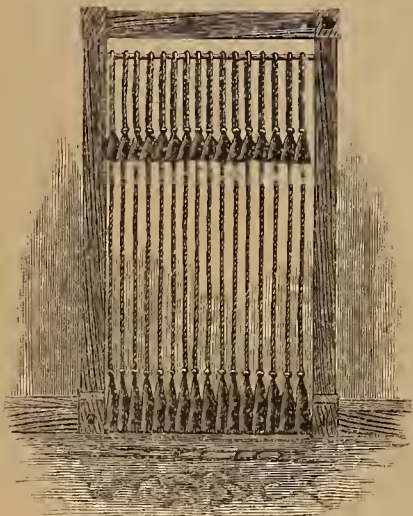
The bloom wears off of everything,
The fuzz rubs off of the peach;
And it gets very irksome, after awhile,
To do nothing in life but teach.
They have homes for men who were wounded
in war,
They have homes for disabled preachers,
But I do not know of any "home"
For tired, worn-out school-teachers.

HOME TOPICS.

RASPBERRY PUDDING.—When one tires of eating raspberries uncooked, a plain pudding may be made as follows: Fill a pudding-dish with bread, either white or Graham, broken into small pieces.

Stew a quart of raspberries, rub them through a sieve, sweeten to taste; heat the juice again and pour it over the bread, using as much as the bread will absorb. Beat the whites of three eggs until they are stiff, add three tablespoonfuls of powdered sugar, spread it over the top of the pudding and set it in the oven long enough to take a faint tinge of brown. Serve this pudding cold, with cream, if you are so fortunate as to have it, but it is good without. It is also nice made of blackberries.

RASPBERRY JAM.—The addition of a pint of currant juice to six quarts of raspberries makes a nicer jam than when the



ROPE PORTIERES.

berries are used alone; and jelly made of one third red raspberries and two thirds currants, preferably white ones, is most delicious. To make the jam, pick over the berries carefully, weigh, and put them in a preserving-kettle with the currant juice, and let it cook slowly for half an hour, stirring it frequently. Add a pound of sugar for each pound of the berries, taking no account of the currant juice. Let the whole cook together until it is a thick jam. It will be necessary to stir it

almost constantly, but it will not need to cook long after the sugar is added. This jam will keep perfectly if it is put into glasses, left to stand until cold and then a thin layer of melted paraffin poured over the top and a layer of cotton batting tied over each one. I prefer the paraffin to brandied paper for keeping all jams and jellies.

SUMMER PORTIERES.—It is sometimes desirable to have a summer substitute for the heavy portieres used in the winter. I lately saw one made of rope, which looked cool and pretty, and did not hinder the free circulation of air. To make this, cut the rope into lengths long enough to pass through the rings on the pole, reach down about half a yard and tie in a slip-knot, with about eight inches below the knot, the other end to reach to the floor. Tie a knot about eight inches from the bottom and fringe both ends to the knot.

FLOWERS IN VASES.—No one would like to be deprived of the pleasure of beautifying their homes with cut flowers, at this season of the year when they are so abundant, but care should be taken that the water is changed every day and the vases washed at least every alternate day. Any one who has noticed how offensive the water in vases will become in a short time, from the decaying stems of the flowers, must see that if not attended to it will be a source of danger by poisoning the air in the house. Some flowers fade much quicker than others, but a bouquet ought never to be renewed by removing only the faded flowers and adding fresh ones and fresh water to that already in the vase. The only safe way is to take out all the flowers, throw away the water and put in fresh. If there are some flowers you wish to save, cut off the ends of the stems and put them with the fresh flowers. Do not run the risk of polluting the air of your homes with the gases from stagnant water and decaying plants.

MAIDA McL.

DRESS AT HOME.

It is a very nice plan, and adopted by many ladies who have their time fully employed, to set aside one day of the week to be at home; then friends can be sure to find them in.

The dress for this afternoon can be as stylish as you please, or as plain. On one such occasion a tall brunette wore an amber-colored cloth dress made princess, with velvet sleeves the same color. Full lace fell from the elbow-length sleeves, and a panel of gold embroidery finished one side.

Pretty young matrons wear velvet and damask with long trains; pretty young girls, bengaline, Lansdowne or Henrietta, with short trains. But the young ones need not be unhappy on this account, as no arts of toilet can make up for the charms of youth.

Velvet is now much used for yokes to princess dresses, and also for broad collar trimmings.

All sorts of dainty designs appear in the all-wool challies. Bright scarlet is a favorite, with patterns of black running over it. The trimming should be black velvet ribbon and black lace. Black gloves, black stockings and red Oxford ties, and entirely black lace hat, are very pretty accessories with this dress. For a very fair lady with very blonde hair this costume would be more attractive than for a brunette. Bright red has a tendency to make a very dark person look coarse, especially if they have high color with it. They are much more stylish in grays or the delicate tints of other colors.

Very pretty bride's dresses and graduation dresses are being fashioned of Henrietta, Lansdowne, crape and mull. Those of Henrietta are more suitable for stout persons made very snug fitting, and with white, feathery trimming or trimming of white silk cords. Lansdowne is an exquisite new material, capable of much puffing; with this, lace and ribbons are more effectual, full waist and full sleeves. For bridesmaids, it can be obtained in other colors, tan being a favorite, with pink accessories.

Outside wraps of cream-white flannel or

Bedford cord are very desirable for young people.

White chip hats trimmed with cream-white ribbon, with a few white flowers with green stems, make simple, stylish hats for young girls.

The high, wired bows are very beautiful in their effect.

The flowers in the milliner's onrival nature. As they express it in the Mikado:

"The flowers that bloom in the pot, tra la,
Have the bulge on the flowers of spring."

And while we can pick from nature's gar-



NO. 1.—EDGING—TATING.

den free, the milliner will be sure to charge us beautiful prices for culling from her garden. Avoid the common ones, however, and stick to ribbon entirely, if you cannot touch the expensive ones.

The tone to a dress is often given by its sleeve.

No. 1 will do in all materials for the warm weather. The lace can be inexpensive or costly, as you choose. In No. 2 the puff can be China silk or crape, while the lower part is of the dress goods; or that, even, can be a distinct brocade material. No. 3 is combined of a deeper lace, going to the top of the arm; the top puff can be one color, the undersleeve another. Silk sleeves are used in all dresses, and are much cooler in consequence.

We give, also, two more patterns of tating. They are both worked with an extra spool of thread and the bobbin. These are quite difficult patterns, and should only be undertaken after one has become expert at the plain kind.

LOUISE LONG CHRISTIE.

A HINT FOR THE LAUNDRY.

DEAR SISTERS:—I have been a reader of FARM AND FIRESIDE for several years, and really do not know what I would do without it; I find so much useful and valuable information in its pages. I preserve all my papers with care, and would not like to part with them.

I like Mary Sibley's letter about country women very much. I think we should consider ourselves most blessed of women, to be free from the turmoil and constant whirl of city life. We have purer air and more outdoor exercise, which is naturally followed by better health; and what more can we ask, if we will just find time for reading and other recreation away from the kitchen.

I have a way to make flour starch that will not turn clothes yellow, and which I consider as good as the regular laundry starch. It may be old to some, but may be a help to others. Take a bowl of flour, wet it with cold water until it becomes as stiff as dough; then, in a basin of cold water rub and wash the dough until all the starch is out and thick, yellow substance is left, which can be thrown away. Strain the starch water and place it over the fire until it boils, and it is ready for use.

Can some one tell me how to wash black embroidered lawns so they will keep their color and look well? MRS. E. W.

DRESSES.

Old Polonius, hateful to others as he was, nevertheless gave wholesome advice to his son when he said: "Costly thy habit as thy purse can buy."

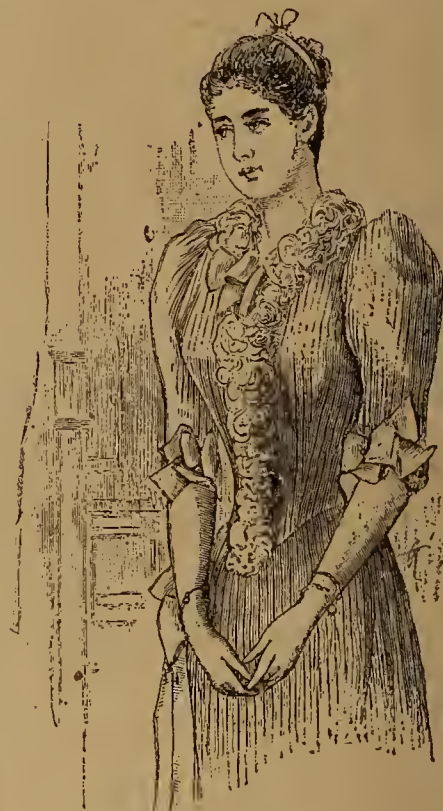
It may be the young man, Laertes, took a just pride in following instructions which, no doubt, were as acceptable to him as they would be to the modern young man, who, perhaps, does not need parental encouragement of such a nature. We may presume as we please, but presumptions of that character will be very likely to take us from the "thread of our discourse."

"Costly thy habit as thy purse can buy." Does that mean that if our purse allows it we must be elegantly attired? I hope not exactly that, for that involves too much bother.

To be well dressed, one does not require a variety of dresses, especially for the country. A sensible woman said: "One dress a year, quiet and of good material and well made, is all I require, and I always feel respectably clad." Of course, she did not include her work dresses; neither do we suppose that one year's good service rendered the new gown unfit for a second making. She meant that one new gown a year kept her wardrobe in good state. Speaking of the word gown, isn't it much more suitable than dress?

There is so much in selecting a dress for general country wear. Driving soon renders a wash dress unrepresentable, for the reason that it is so easily mussed. A man gets a business suit, and so long as it is wearable he wears it. "What shall I wear?" does not confront him every morning and afternoon as he goes about his work. Why cannot a woman do likewise? She might, but she must be sensible in her selection of a dress for such a purpose. If it be loud or gaudy, she will soon tire of it; so will the people who are obliged to look at it day after day. If she is wise it will be quiet and simple, and once accustomed to it she will not exchange her one well-kept suit for half a dozen half-worn ones of the same grade.

"Where is the rest of your baggage?" a young man recently inquired of his cousin, as he was about to accompany her to the railway station. He had been presented with but a single valise, and that



GRADUATION DRESS.

of diminutive size, and as his cousin was a woman much of the time absent from home, traveling from place to place among all grades of people, it no doubt seemed a marvel to him (to paraphrase a little) that one small valise could contain enough to supply any woman. On informing him that she was blessed with a sufficiency, he glanced at her and paid her a compliment by saying: "Why, you always look nice."

Some country women object to being dubbed as "from the country," but they deserve to be if they dress in such a way as to attract attention. A plush cloak and a calico dress—gown, if you please—is not an unfrequent combination. There is a harmony in some things, but not in that.

A city man once remarked that when his mother went down street to shop in



NO. 2.—EDGING—TATING.

the morning, she wore a plain, quiet frock, but when his Aunt Anna, who was a well-to-do country woman, came into the city, a silk dress, fine bonnet, fan, gold watch and long chain were appropriated for the occasion. This attire, save the chain—"heaven save us from the mark"—is properly suited to some occasions, but not to morning shopping. Maybe the young man was a trifle severe on

his relative, but at the same time she, though thoughtlessly, called forth the denunciation.

That a bride was the possessor of two frocks only, a startling green silk and a



No. 1.

appearing in a faded, worn-out print frock. Calico is cheap, and pretty, too; especially the indigo blues are neat and serviceable.

OBSERVER.

AGRICULTURAL POINTERS.

I have grown *amazín'* corn now for thirty years or more, Got the culture down so fine that to touch it makes it sore. Can't make nary dent in it; flint corn's what I mostly raise. My kind is perennual—when she's rooted once she stays. Folks say leather is no good fertilizer, but indeed I know better; makes *my* corn start an' grow up like a weed. Surface culture suits me well; fit your cultivator out. With a short and narrow shoe, an' you'll hear the kernels sprout. Walkin' cultivator beats ridin' higher than a kite, Though the latter alnt so bad when ye strap the shoe on tight. Folks say *pruin'* roots is bad; don't you mind 'em—now I'll bet I've pruned half a bushel out, an' the crop's a-growin' yet. Talk about yer crops o' corn, tell yer gret big yarus, I'll go Better yet; I've got a crop always with me—on my toe.

—Rural New-Yorker.

COUNTRY WOMEN WHO SHOP IN TOWN.

Nearly every woman who lives in the country goes more or less to town, and the majority have considerable regard for their appearance when they get there.

She who lives some miles away, and must travel in a buggy, soon discovers that such trips are hard on her good dresses. Now, one would think that the young woman of average intelligence would soon try to provide herself a suitable shopping dress. But does she? For twelve years I have been noticing this point closely, and my opportunities have been most excellent for arriving at a conclusion in this matter, which, in my judgment, is a subject well worthy of consideration.

And let me tell you that our sex shows reckless extravagance and bad taste. I have often noticed fairly good silk dresses and excellent cashmere ones worn by women who traveled over miles of rough or muddy country roads for a few hours of shopping in town. Usually, such



No. 2.

dresses were a few seasons behind the style, and so were noticeably inappropriate for such excursions, besides being a sinful waste.

Why don't the many, as well as the very few, who live in the country (and it is a delightful place to reside) dress suitably when they go to town? A neat, plain dress, if ever so inexpensive and made up in the prevailing style, with a becoming walking-hat and neat gloves and shoes, betokens the lady far more than costlier clothes that do not harmonize.

Women in the country usually have too many dresses and too few hats. And their clothes are always getting out of

style on their hands because they have too many. Better to get a serviceable dress for shopping, and wear it right along while it lasts, and thus be in style and save so much making over of dresses.

Few women look well in black or light gray, and some shades of brown are trying. Bright colors are not for the average woman who goes little in fashionable company, to socials, dinners, etc., while quiet colors are hers, that she may rival in taste and elegant simplicity her gayer sisters.

OLYMPIA.

ABOUT THE HOUSE.

A PINEAPPLE TRIFLE is a nice evening dish, to serve with delicate cake. Chop a ripe, sweet pineapple in small pieces and add two cupfuls of sugar to it; set it away, and soak a package of gelatine in cold water for two hours. At the end of this time pour a cupful of boiling water over the gelatine and stir it till it is melted. Add it to the pineapple with the juice of a lemon, and stir the mixture on the ice till it begins to be quite thick. Beat to a stiff froth the whites of six eggs, and add them to the pineapple, which should be quite thick, almost firm and molded by this time; beat the whole till it is creamy, and serve with sweet whipped cream or a delicate, soft custard.

FOR CHARLOTTE RUSSE, split ten lady-fingers, and arrange them in a mold. Dissolve one third of a box of gelatine in a pint of rich milk. Whip three pints of cream to a froth, beat the yolks of six eggs and mix in half a pound of sugar; then beat the whites and add them, strain the gelatine over these, stir quickly, pour in the cream, flavor with vanilla, and pour into the mold. Set on ice for a time, and ornament the top with whipped cream, or ice with fancy-colored icing.

TO CANDY ORANGES.—Take a dozen firm oranges. Peel the outside of the skin off

as thin as possible. Mark off in quarters and cut out every other one. Pass the knife around the inside and remove the pulp. With a spoon scoop out the lower part or bowl which is left, drop in water and boil gently long enough to soften the peel, then boil in thick sirup until clear, and let them remain in the sirup over night. Then take up, drain, and let dry. Sprinkle well with granulated sugar and fill with orange jelly. Set each one by itself on a large, flat dish and pour over the sirup.

ORANGE FLOAT.—Make a custard of two coffee-cupfuls of milk, yolks of four eggs, four tablespoonfuls of white sugar, and set aside to cook. Take the juice of two oranges and the rind of one, strain over two tablespoonfuls of gelatine and one teacupful of sugar; pour gently over this one pint of boiling water; stir until dissolved and set aside to cool; beat the four whites stiff, and stir into this one spoonful at a time; put the grated rind into the custard; put into a glass bowl and heap the float upon it. It requires a good deal of beating. Oranges have never been more plentiful and cheap than they are this season, and there are almost innumerable forms and methods in which they can be employed, either alone or in connection with other materials for the table.

IRISH FADGE.—Into three quarters of a pound of brown flour and a teacupful of white, well mixed, rub three ounces each of lard and drippings; add a teaspoonful of baking-powder and a little salt; stir a dessert-spoonful of vinegar into two well-beaten eggs and mix into a stiff paste; roll quickly and lightly about three quarters of an inch thick, cut into triangular pieces, and bake at once in a brisk oven for twenty minutes. This is delicious split and buttered while hot; it is equally good cold, with butter or marmalade.

Every woman who has not done so already, should send for the free trial package of Frank Siddall's soap (see page 7), and try this new way of doing the washing. You will never go back to the old way.

WOMAN'S WORLD.

Over eight hundred men in McLean county, Ill., engaged in a wolf chase, and the only animal slain was that by Miss Stella Marr, nineteen years old.

Mrs. Alice Whittaker, in the *Grange Homes*, says:

"The fiction that a wife is supported by her husband, and never earns anything by her house work and the care of their children, is largely believed to-day, and many a man becomes a widower before he realizes that his lost partner was really a partner in the business of making and keeping a home, that she worked hard, and that there ought to have been 'money into it.'

"Women may well be satisfied with the advancement gained during the century, with the exception of their legal status. A mother with no legal right to her child, a widow with but forty days' free use of the home after her husband's death, a wife who cannot will her property as she pleases, collect money loaned to her husband or enter into a business contract with him are not free women.

"It is not the right to vote for town clerk or governor that the suffragists are looking for, but the right to smooth away some of the heartaches and the despair of women who, according to their own statements, have all the rights they want in the *suushy* days, but are helpless in the darkness that death, crime or unjust laws sometimes bring, or troublous circumstances which the kindest husband may not foresee."

Mrs. A. V. Boggs, nee Ida Naylor, fourteen years assistant postmaster at Canton, Ill., was never absent nor tardy, walked 16,056 miles in going to and from home. Miss Charlotte Berry has been cook at the Churchill House for twenty years, giving entire satisfaction.

A very pretty young woman sits in the main parlor of the Holland House every afternoon. Usually, her stay lasts two hours, and during that time constant streams of ladies flock about her and question her on every imaginable subject. She is Miss Fletcher, and her card reads: "Guide and chaperone." She shows the guests all the places in town. Her occupation is a new one, so far as hotels are concerned.

Nine young women sat in the chancel of the South Park Avenue M. E. church of Chicago, one evening recently. They wore dainty white muslin caps, gowns of blue and white striped linen and white linen aprons. They comprised the graduating class of the National Temperance Hospital training school.

Mrs. Lydia B. Lair, in the *Farmer's Home Weekly*, says of clubs:

"A great deal is spoken and written of woman's club work, pro and con. It may be indifferent, wishy-washy, gossipy, or even scandal-breeding. It may, but it is not; nor is there any prospect of its becoming such. Clubs are generally instituted and held together by the strong, mature womanhood of the community. These women foster them, and to a certain extent run them, as any and every organization must have some head. These women are earnest and in earnest. They are painstaking laborers for the good of their own community, and also those neighboring. They cannot afford to have bad work any more than they can afford good work badly done. Their motto is upward, outward, inward, outward. They are a blessing to any community wherein they dwell.

"The young girl just through school need no longer be 'finished,' but has a realizing sense of having just begun when she sees the hand of the matron element of the community reaching down and beckoning her to come up higher; when she is enabled to realize that foundations only have been laid, and now comes the time for the real structure. Her mentality has been trained, and to a certain point developed.

"If club life be a blessing to middle-aged women, what must it be to these girls with their superior early training? They have our

experience and scope to add to their drilling; our knowledge, gained from life-long research in the realm of books and association with lofty men and women, is theirs without even the asking. Then, too, there is the stimulus of competition, as well as the desire to go higher; and all of this verily falls into the lap of young womanhood through the club organizations of our day.

"The club woman is a student. She is a better, broader, nobler woman, inasmuch as she becomes a reader of better, broader, nobler books. She reads the works of great and good men—for 'lives of great men all remind us we can make our lives sublime.' Her home gets not one iota less care than it needs; her children get a new, an added care which develops the immortal nature. She not only spends less time on personal adornment, but sets an example that is felt wherever she may be; not so foolish as to discard pretty clothing, but so wise as to look her best, her youngest, her happiest, without wasting time to that end. Long may women's literary clubs flourish, purifying the moral air, fertilizing the mental and enriching the religious."

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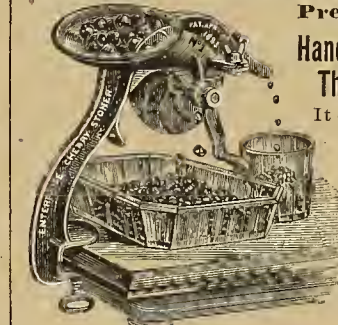
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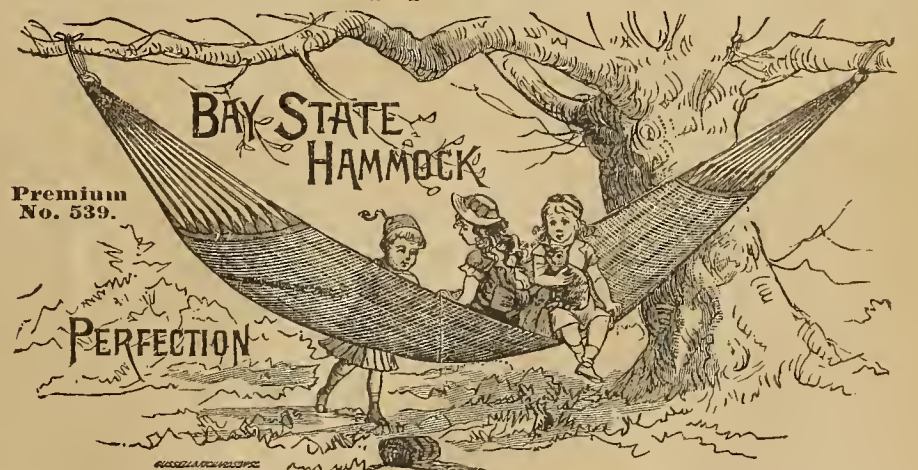
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Our Sunday Afternoon.

RETROSPECTION.

If we sit down at set of sun
And count the things that we have done,
And, counting, find
One self-denying act, one word
That eased the heart of him who heard;
One glance most kind,
That fell like sunshine where it went,
Then we may count that day well spent.
But if, through all the livelong day,
We've eased no heart by yea or nay;
If through it all
We've done no thing that we can trace,
That brought the sunshine to a face;
No act, most small,
That helped some soul, and nothing cost,
Then count that day as worse than lost.

THE LITTLE WATCHES.

A FEW years after the war an old man entered a Little Rock store, and taking from his pocket an old buckskin pouch he emptied two coins on the counter, and then, after regarding the silver for a few moments, said: "Mister, I want to buy some goods to make a dress."

"That money is mutilated, old gentleman. This twenty-five-cent piece has notches filed in it, and this fifty-cent piece has been punched. You see, they have been abused. I can't take them."

"Abused?" said the old man. "Abused?" and he took up the fifty-cent piece and looked at it tenderly. "And you won't take it on account of the holes? Heaven grant that I did not have to offer it to you! Years ago, when my first child was a little girl, I punched a hole in this coin, and strung it around her neck. It was her constant plaything. At night when she went to bed we'd take it off, but early in the morning she would call for her watch. When our John—you didn't know John, did you? No. Well, he used to come to town a good deal."

"Where is he now?" asked the merchant, not knowing what to say, but desiring to show appreciation of the old man's story.

"He was killed in the war. I say that when John was a little boy I strung this quarter around his neck. One day his watch got out of fix, he said, and he filed these notches in it. He and his sister Mary—that was the girl's name—used to play in the yard and compare their watches to see if they were right. Sometimes John wouldn't like it because Mary's watch was bigger than his, but she would explain that she was bigger than he was and ought to have a bigger watch. The children grew up, but as they had always lived in the woods they were not ashamed to wear their watches. When a young man came to see Mary once she forgetfully looked at her fifty-cent piece. 'What are you doing?' asked the young man, and when she told him that she was looking at her watch he took it as a hint and went home. After this she did not wear her watch in company."

"Well, Mary and the young man married. John went off in the army and got killed. Mary's husband died, and about two years ago Mary was taken sick. When her mother and I reached the house she was dying. Calling me to her bed, she said, 'Papa, lean over.' I leaned over, and taking something from her pillow she put it around my neck and said, 'Papa, take care of my watch.'"

The old man looked at the merchant. The eyes of both men were moist.

"Do you see that boy out there on the wagon?" said the old man. "Well, that is Mary's child. I wouldn't part with this money, but my old wife died this morning and I have come to buy her a shroud."

When the old man went out he carried a bundle in one hand and the "watches" in the other.—*Little Rock Gazette.*

SOME EMBARRASSING TEXTS.

A recent story, apparently founded on fact, was of a minister who, after closing his sermon, taking up the collection and making the usual announcements, reached for his hymn-book and announced the 472nd hymn, when he saw one of the deacons rise from his seat and start up the aisle. The deacon approached the pulpit and whispered to the minister, who thereupon said: "Deacon Jones has just informed me that I neglected to give one

important notice. It is that there will be a meeting of the Ladies' Benevolent Society on Wednesday afternoon, at three o'clock, at the house of Sister Simpson. I hope there will be a large attendance. Now let us sing in conclusion the 472nd hymn." Roaching for his hymn-book he read, to his own amazement and the amusement of the congregation: "Lerd, what a thoughtless wretch was I!" When this was told to a minister of this city he said that he could match it by an incident in his own experience. "I have no doubt that story was true," he went on. "At least it's good enough to be true. Now, listen to this: When I was in the theological seminary I went out one Sunday to preach in a small village in Massachusetts. It was a rainy Sunday, and the congregation was exceedingly small; not more than twenty-five or thirty were present. I suppose the fact that a theologian was to preach had something to do with the attendance. I had selected my hymns without much care, and you can imagine the shock I experienced when I announced the opening one and began to read it. The first line was: 'O my people, faint and few!' I got through with the service in some way, but you may depend upon it that I have never used that hymn since."

VERY TRUE.

The man who says just what he thinks, should first of all take care, that what he thinks is fit to be said. If what he thinks is vulgar or profane, we suppose he would try to suppress it; but if what he thinks is fitted to wound others, without accomplishing any good, what right has he to say it? It may be duty, sometimes, to speak out, even if so doing gives pain to somebody, because there is a reasonable prospect of doing good to somebody else by speaking. To give certain pain without prospect of doing any good, is as wanton as the sport of little boys who pull off the wings of flies "just for fun."

No, good friends, do not seek a cloak for your rudeness under that frankness. Be manly about it, and confess that you are rude because you enjoy shocking people, because you have a brutal pleasure in causing pain, or because you like to speak in pure wantonness, not caring where your words strike. Until you confess that, you do not fully live up to your own rule of speaking just what you think.

IMPORTANCE OF TRIFLES.

Many failures in life are best illustrated by futile attempts to thread a needle. It seems easy enough, but unless one's eyesight is extra sharp a fine film of thread will extend beyond its visible point, and as this goes one side or the other of the eye the thread is turned away. It is only by forgetting what at first glance seems to be the end of the thread, and looking at the fine point in advance that it can be put through. Just so it is in life. Trifling mistakes made early give a bent away from the true course that it is hard to overcome, and impossible to except by beginning anew. On the other hand, if at first due care is taken to watch the end of the filament it becomes much easier to follow it with the thread through the eye. In life this means that attending to the small trifles that form character in youth is the best preparation for success in later years.

WHEN AND WHAT TO READ.

If you are impatient, sit down quietly and have a talk with Job.

If you are just a little strong-headed, go to see Moses.

If you are getting weak-kneed, take a look at Elijah.

If there is no song in your heart, listen to David.

If you are a policy man, read Daniel.

If you are getting sordid, spend a while with Isaiah.

If you feel chilly, get the beloved disciple to put his arms around you.

If your faith is below par, read Paul.

If you are getting lazy, watch James.

If you are losing sight of the future, climb up to Revelation and get a glimpse of the promised land.—*Golden Censer.*

It is a woman's duty to herself and family to save herself all unnecessary hard work and thus preserve her health and good nature. You can save yourself a great deal of hard labor by investigating the now plan explained on page 7, and the investigation will not cost you anything.

What They Are Good For.

Brandreth's Pills are the best medicine known.

First—They are purely vegetable, in fact a medicated food.

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The first two or three doses tell the story. The skin becomes clear, the eye bright, the mind active, digestion is restored, costiveness cured, the animal vigor is recruited and all decay arrested.

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Takes hold in this order:

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Liver,
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Driving everything before it that ought to be out.

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A BIG OFFER 50c. MADE IN A MINUTE! If you will hang up in the P. O., or some public place, the two show bills that we send, we will give you a 50c. cert., and send it in advance with samples and bills. This will trouble you about one minute, and then if you want to work on salary at \$50 or \$100 per month, let us know. We pay in advance. **GIANT OXIE CO., 21 Willow St., Augusta, Me.**

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If afflicted with sore eyes use **Dr. Thompson's Eye-Water**



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Nothing will
WHITEN and CLEAR
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The new discovery for dissolving and removing discolorations from the cuticle, and bleaching and brightening the complexion. In experimenting in the laundry with a new bleach for fine fabrics it was discovered that all spots, freckles, tan, and other discolorations were quickly removed from the hands and arms without the slightest injury to the skin. The discovery was submitted to experienced Dermatologists and Physicians who prepared for us the formula of the marvelous Derma-Royale. THERE NEVER WAS ANYTHING LIKE IT. It is perfectly harmless and so simple a child can use it. Apply at night—the improvement apparent after a single application will surprise and delight you. It quickly dissolves and removes the worst forms of moth-patches, brown or liver spots, freckles, blackheads, blotches, sallowness, redness, tan and every discoloration of the cuticle. One bottle completely removes and cures the most aggravated case and thoroughly clears, whitens and beautifies the complexion. It has never failed—it CANNOT FAIL. It is highly recommended by Physicians and its sure results warrant us in offering

\$500 REWARD.—To assure the public of its merits we agree to forfeit Five Hundred Dollars cash, for any case of moth-patches, brown spots, liver spots, blackheads, ugly or muddy skin, unnatural redness, freckles, tan or any other cutaneous discolorations, (excepting birthmarks, scars, and those of a scrofulous or kindred nature) that Derma-Royale will not quickly remove and cure. We also agree to forfeit Five Hundred Dollars to any person whose skin can be injured in the slightest possible manner, or to anyone whose complexion (no matter in how bad condition it may be), will not be cleared, whitened, improved and beautified by the use of Derma-Royale.

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Price, \$1.00. EVERY BOTTLE GUARANTEED.

Derma-Royale sent to any address, safely packed and securely sealed from observation, safe delivery guaranteed, on receipt of price, \$1.00 per bottle. Send money by registered letter or money order with your full post-office address written plainly; be sure to give your County, and mention this paper. Correspondence strictly private. Postage stamps received the same as cash.

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Our Farm.

THE POULTRY YARD.

Conducted by P. H. Jacobs, Hammonton, New Jersey.

TOO MUCH WEIGHT.

It is probably a mistake to attempt to have laying hens so improved as to gain weight with each improvement. Weight and egg production should be separated, just as in the case with the beef breeds and milk producers of cattle. The greater the size and weight, the more sluggish and less active the bird, and the greater the cost of keep, while the number of eggs will not be increased. The Brahmas, Cochins and Plymouth Rocks can be made to attain very heavy weights, when fed for that object, but they would really be more serviceable if of medium size. On the market stalls the medium-sized carcass is always preferred, and it is safe to assert

its propensity to easily fatten is a desirable characteristic if hens are intended for market, but when Brahmas reach maturity they are liable to become too fat as layers unless carefully fed, and but little corn should be allowed them for that reason. When crosses are made with the Leghorn male and Brahma hen, the pullets so procured are excellent, being good foragers and layers, but the males from the cross are worthless, except for the market. A cross of Indian Game male with the Brahma hen produces fine table fowls. The pure-bred Brahma males are excellent for improving common flocks, both in size and egg production.

A LIGHT POULTRY-HOUSE.

This poultry-house may be of any size, or may be arranged inside as preferred, the object being to give the design of a poultry-house that is well lighted. The door at the end is for summer and is intended simply to prevent dogs or cats

proper lacing. Two yards are required also for Dark Brahmas, Brown Leghorns and Wyandottes. So far as the farmer is concerned, while he should be very careful in selecting birds that are pure and well bred, yet it is not necessary for him to breed from two yards that he may have the males and females of a certain color. The breed used should be pure, and as near the standard requirements as possible, for the points of excellency are, after all, the only indications of purity of blood, and but for them there would be no mode of designating the breeds; but the farmer should select for vigor in preference to perfection of comb, legs, wattles, etc., and he should buy in the fall instead of spring, aiming to improve his flock and make it better each season.

HOW MANY EGGS TO A POUND?

Eggs vary in size and weight. Some eggs will weigh as much as six to the pound, and others twelve to the pound. Eight eggs to one pound is considered the standard. The Minorca and Black Spanish lay the largest eggs. When we take the weight of the eggs into consideration, we find that the work done by some hens is enormous. A hen laying six eggs that weigh a pound does twice the service performed by one producing eggs

that require twelve to weigh a pound, provided they equal each other in the number of eggs laid. It is the exception that six eggs will weigh one pound, yet it has happened frequently. If eggs were sold by weight, the poultry man would be benefited, as he would prefer to keep hens that lay large eggs, thus securing the greatest return before the hens begin to moult. It costs more to produce a large egg than a small one, and the farmer should

have this advantage in his favor instead of permitting the customer to receive more than a fair proportion.

BROKEN FLINT AS GRIT.

Hard flint, crushed or ground, will some day be placed on the market for the use of poultrymen in providing grit for fowls. It is true that nearly all sections have gravel, but gravel is worn by the elements into round shapes, or rather the sharp edges are taken off. The object in swallowing hard substances by the fowls is to secure sharp-cutting material, and ordinary gravel does not supply their wants. Many persons use oyster shells, reduced by grinding or pounding, but shells are too soft and do not fully serve the purpose required. Flint is the best material, as it always presents sharp edges, no matter how fine it may be in condition.

DOGS EATING EGGS.

There is only one safe method of preventing prowling dogs from eating the eggs laid by the hens, and that is to break up all nests made by the hens outside of the poultry-house, leaving an entrance to the house sufficiently large for hens only to enter. The poultry-house is really the place for all nests, as the hens should not be compelled to seek other resorts.

Farmers, who want to save their wives all unnecessary labor, should read about the new way of doing the family washing, as explained on page 7 of this issue, and persuade them to give it a trial. It will cost nothing.

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YOU CAN HAVE ONE FREE
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INVIGORATING THE BREED.

As there are several varieties of each breed, the flock may sometimes be invigorated by crossing in a manner to preserve the purity of the breed to a certain extent. For instance, if you are not particular about "points," use a White Leghorn male with Brown Leghorn hens one year, and a Brown Leghorn male the next. For Cochins, a Buff Cochin may be used in alternation with the Partridge or White Cochin. To improve Black Spanish, cross with a Minorca male. A cross of Black Leghorn with Minorca hens produces a grand layer, and a cross of the Barred Plymouth Rock with the White variety is also excellent. Of course, crossing destroys uniformity of color, but improves otherwise.

CORRESPONDENCE.

RECORD OF A SMALL FLOCK.—As others are giving their experience in chicken raising, I will tell what I did last year from April 1, 1891, to April 1, 1892. I began with 7 hens and 1 rooster. I hatched 120 chickens, and raised 100 of them. They laid during the year, 132 dozen eggs. I sold 72 chickens for \$18, and got about 15 cents per dozen for all the eggs. I fed corn and oats, with the scraps from the table. I paid \$11.72 for feed, and for building my chicken-yard fence. Some hens became broody, and they brought off 65 chickens. I stand something like this: On hand April 1, 1892, 7 hens, at 25 cents, \$1.75; cost of feed, \$8.82; cost of fence, \$2; total, \$12.47. The receipts were: To eggs sold, \$19.55; to chickens sold, \$18; to chickens eaten, \$4.50; balance on hand, 11 hens, \$3.75; 65 chicks, about \$1.50; total, \$47.30; profits, \$34.83. S. C. F.

CANARIES AND OTHER MATTERS.—As I am writing I thought I might just as well write a few items for publication, if you think them worthy. I never get a paper but I wish I could answer some of the contributors. I wonder how many of the sisters use their egg-heater to churn with. I have often churned in a large teacup. Also in a fruit bottle, by shaking. If the cream is just right, it will come very quick. If I have a mess of cream that gets frothy and does not come well, I fill it up with cold water and set it away until the next day, skim it off, and churn again. Some of your contributors can beat me with chickens, but I think I once beat the most of them with canaries. I raised twenty in one summer with three birds. One female laid twenty-one eggs, and the other twenty-four. I sold my birds at one dollar per pair. When I first got them, they were very full of mites. I almost spoiled my cage by baking it, but nothing did so much good as a little bacon rind woven in between the wires. The birds would peck it and then pick themselves with their greasy bills, and I soon got rid of the lice. I once had a mocking-bird. At moulting time it refused all its feed. I mixed a little gernea and corn-meal with milk. It ate it greedily.

AUNT ROSA.
[We are unable to explain the qualities of "gernea," as it may be a local term.—ED.]

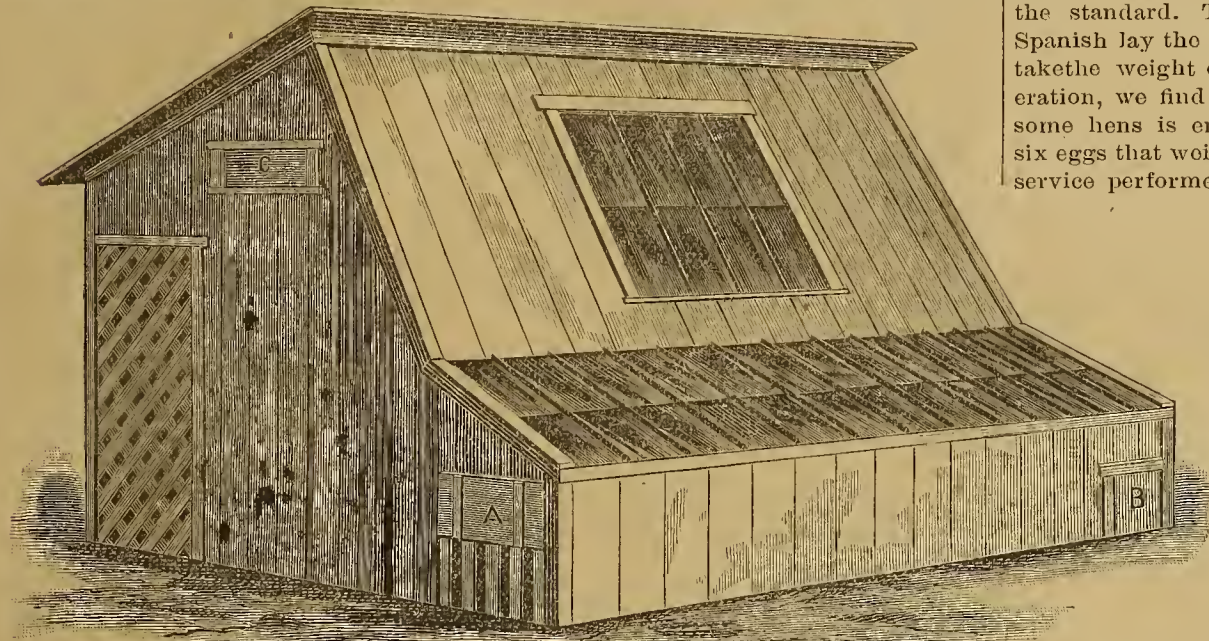
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A LIGHT POULTRY-HOUSE.

that as the weights increase the production of eggs decreases, though individual large hens often prove to be excellent layers. Some birds are really heavier than they appear, which indicates that they have been improved in the direction of table poultry rather than in producing eggs. The Indian games are an example of this class, and the Plymouth Rock is gradually becoming of the same condition.

It is not extraordinary for males of the Plymouth Rock breed to weigh twelve pounds, while Brahmas have reached fourteen pounds or more, the cost of maintenance of such large breeds destroying all advantages gained by the weight. There is always some sacrifice in obtaining weight. We lose early maturity, the propensity to forage, and entail disease by overfeeding. We have never yet seen very large birds that were profitable. It takes too much feed and time to produce them. When breeds are being improved the size should not be a first consideration. Hardiness and activity are more essential than size. The Leghorn is small, but it is unexcelled for producing eggs, and is also a fine market fowl, despite all that may be stated to the contrary. The tendency to produce great, mammoth birds is simply to obtain something more ornamental than useful. A Brahma male should really not exceed ten pounds weight, and a Plymouth Rock eight pounds, which is sufficient size for any breed if the hens are to prove active and prolific.

LIGHT BRAHMA CROSSES.

Where size and hardiness are required the light Brahma is unexcelled. It has many advantages over some breeds, and there are drawbacks connected with the breed which often debar it from some yards. It is safe to say, however, that Brahma chicks are more easily raised than any other, and if they are fed with judgment, it is not often that the hens are excelled for laying. The Brahma has a small pea-comb, which is a partial protection against frost in winter, and it is also aided by heavy feathering. As a bird adapted to confinement, it is excellent, for it cannot fly over a fence three feet high, and is contented in disposition. Its faults are leg feathering (which is a disadvantage during wet weather), lack of breast meat, clumsy movements when carrying chicks and aptitude to fatten.

from entering. In winter it is removed and a close-boarded door substituted. The entrance hole (A) is closed with slats at night, and is arranged so that the slats may be covered with a drop door, if so desired. There is also a closed entrance at B, a ventilator being at C. The roof may be made flat, and tarred paper used, if desired.

GEESE ON THE FARM.

The Embden, a white goose (both male and female), is, with the Toulouse, the largest of all breeds. The best cross for the market is the Toulouse gander and Embden goose. The Toulouse is part-colored, and the male and female are alike. In fact, the male and female of any pure breed are alike in color. The large breeds do not forage over as much ground as the common kinds, but produce twice as much feathers, in weight, and fatten more readily for market. An adult gander of the Embden or Toulouse breeds should not weigh less than twenty-five pounds and the goose twenty-three pounds, though individuals have been known to reach as much as fifty pounds. The best way to grade up a flock is to procure a gander of the Embden breed, mate him with large common geese and mate the female offspring with a Toulouse. The males should then be pure-bred Embdens, as they are pure white, which is an advantage where the feathers are considered a valuable product.

BUYING PURE BREEDS FOR IMPROVEMENT.

Show-birds, bred especially for perfection of comb, ear-lobes, wattles and plumage, are considered by fanciers as very valuable, but the value of such birds is more for points of excellency for the show-room than for quality. So far as utility is concerned there are hundreds of birds far better than the show-birds, being equally as well bred and possessing greater hardiness and vigor than birds that are more tenderly raised for exhibition. The requirements of the show-room are such that it is sometimes necessary to inbreed in order to secure certain points, and with some breeds, such as Partridge Cochins, two yards must be mated in order to secure show-birds, one yard of birds being so mated as to produce cockerels of a certain shade of plumage, and another for producing pullets of the

Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Road-scraper Wanted.—P. C., Eureka, Cal. See Directory under road machines.

Soap.—R. M. E., Blaine, Kan. Send twenty-five cents for two hundred recipes for making soap.

Metal Labels for Stock.—M. D. M., Morrow, Ohio. You can get metal stock labels of C. H. Dana, West Lebanon, N. H.

Creamery Wanted.—F. R. M., Salem, Ohio. Send for circulars to firms listed in Directory, under creamery apparatus and dairy supplies.

Bees and Blossoms.—S. C., Tekonsha, Mich. Bees carry the pollen from one blossom to another, and thus are the agents of cross-fertilization.

Carp Culture.—W. C., Macksburg, Iowa, and H. B., Palouse City, Wash. Send thirty-five cents to A. I. Root, Medina, Ohio, for "A. B. C. of Carp Culture."

Salt for Wireworms.—J. M. F., West Brighton, N. Y. From the reports of experiments, neither salt nor lime seem to be of much effect in destroying wireworms.

Tile-drain Machinery Wanted.—J. M. C., Dadeville, Mo. Send to J. J. W. Billingsley, Indianapolis, Ind., for a copy of the *Drainage Journal*, which contains the advertisements of drain-tile machinery.

Cements for Cast-iron.—W. H. M., Brandenburg, Ky. Wood ashes and common salt, wet with water, will stop the crack in a stove. For cementing together two pieces of iron, apply litharge and glycerine, stirred to a paste.

Swivel Plows.—J. P. M., New London, Conn. The swivel plows that are used on hillsides do excellent work on level ground, and in some places are used where no dead furrows are wanted. Write to the plow manufacturers listed in our Directory for full information about them.

Weight of Silage.—J. O. M. desires to know how much space is required to hold a ton of silage. It varies considerably with the form of the silo. Well-glazed corn silage, put in slowly to the depth of 27 feet, has been found to weigh 44 pounds to the cubic foot. A round silo, 20 feet in diameter and 30 feet deep, will hold 200 tons, and cost about \$250.

Red Ants.—D. J. H., Parachute, Col., writes: "We are troubled with red ants, that destroy all vegetables within ten feet of their mounds."

REPLY:—Pour a little bisulphide of carbon into the hills, and cover them tightly. The fumes of this volatile, poisonous liquid will penetrate to the farthest galleries of the ant-hills and destroy every insect.

Tile Draining.—A. P. J. writes: "There is a tract of land back of my house which cannot be drained except through the yard around the house. There are about five acres in the tract, and part of it is quite sloping. How large should the tile be to prevent overflow at the foot of the tile near the house?"

REPLY:—The size of the tile required will depend on the area drained. If there is good fall, a small tile will not overflow in your house yard; one six or eight inches in diameter would surely not.

Ants in Hotbed.—T. W., Rockford, Ill., writes: "In your issue of May 15th is a query regarding ants in a hotbed. I would suggest that R. W. take a large, wide bottle, narrowing suddenly to a rather small neck. Break off the neck as close to the body of the bottle as possible, then bury the bottle in the ground near the ant-hill, leaving the opening exposed and on a level with the ground. The ants will investigate this new hole, fall in, and owing to the shape of the bottle be unable to get out. From time to time the bottle should be taken out and the imprisoned ants destroyed. All the ants from a hill can in this way be caught in a comparatively short time."

Sticky Fly-paper—To Get Rid of Ants.—J. F. T., McMinnville, Tenn. Mix equal parts, by measure, of melted resin and castor oil. Stir thoroughly one minute. While yet warm spread thinly and evenly on any strong paper that is not too porous. Foolscap, writing-papers, show-bills, etc., will do. Spread with a case-knife slightly warmed. Leave a narrow border to handle with. Lay the papers on tables, shelves, etc., where flies are numerous. They will soon cover the papers. Use no water. The oil prevents the resin from hardening, and does not evaporate. The oil leaves no odor when cool. Ten cents will buy enough to kill all the flies in the house.—To get rid of ants in the house, soak sponges in sweetened water; when filled with ants, drop them into hot water.

To Make Lye.—J. R. G., Brownsville, Tenn. "Hickory ashes are the best for soap-making, but those from sound beech, maple, or almost any kind of hard wood, except oak, will answer well. It is said that the ashes from apple-tree wood make the whitest soap. A common barrel set upon an inclined platform makes a very good leach. First, in the bottom of the leach put a few sticks; over these spread a piece of carpet or woolen cloth, which is much better than straw; put on a few inches of ashes and from four to eight quarts of lime, according to size of leach. Moisten and tamp down well, the firmest in the center; by moistening you will not have to wait half a day for the lye to start. It is difficult to obtain the full strength of ashes in a barrel, without removing them after a day's leaching, and mixing them up and replacing. The top should be first thrown off and new ashes added to make up the proper quantity. Use boiling water for second leaching."

[The foregoing is taken from "Recipes for Making 200 Kinds of Soap," published by FARM AND FIRESIDE. Price 25 cents.]

To aid our subscribers we have inserted in our paper a Directory containing the names and addresses of some of the leading implement and machinery manufacturers in the country. See page 4.

VETERINARY.

Conducted by Dr. H. J. Detmers,
Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, other wise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. DETMERS, 35 King Avenue, Columbus, Ohio.

Note.—Parties who desire an answer to their inquiries in this column, must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered under any circumstances.

Sore Teats.—M. M. M., Salt Fork, Ohio. Apply to the sores on the teats after each milking a mixture of lime-water and oil, equal parts, and see to it that the cows are milked with dry hands, and are kept in dry and clean quarters.

A Sick Colt.—A. G., Concord, Ill. The colt of your friend was sick when born, and will have died long before this reaches you. The open rachis (in the naval), through which the urine passed off, should have been closed as soon as possible by means of an operation.

Foul Sheath.—F. O., Clyde, Mich. You may have cleaned the sheath of your horse in too rude a manner, and thus caused sores and lesions. Clean it again, but gently and carefully, with a solution of pure carbolic acid in clean, warm water (1:100), and repeat this as often as necessary.

Rhachitis.—J. H. M., Greensboro, Ga., writes: "What is the matter with a sow that seems to have a cold in her respiratory organs, whose joints are so swollen and tender that she has not stood on her feet for two months? Will it be safe to raise pigs from such a sow?"

ANSWER:—The sow has rhachitis, and should not be used for breeding.

Pustulous Eczema.—J. R. T., Beaver, Pa. What you describe seems to be a pustulous eczema. If the affected parts are not too extensive, you may apply to them, twice a day, a few days in succession, a mixture composed of liquid subacetate of lead, one part, and olive-oil, three parts. The cause, probably, may be found in insufficient grooming; or, to put it in other words, diligent grooming would probably have prevented it.

Septicemia.—J. C. C., Princeton, Ill. Your colt died of septicemia, or so-called putrid fever or blood-poisoning, a disease which, although not of frequent occurrence, usually terminates in death. When treatment is applied, it usually is symptomatic. Besides that, antiseptics would be indicated. It is a disease which, under all circumstances, should be treated only by a competent veterinarian; hence, it is superfluous to go into details.

Rubs Her Tail.—M. O. N., Vermont City, S. D., writes: "What is the matter with my mare? She rubs her tail and hip whenever she has a chance. Sometimes she lifts her hind foot as if she were going to kick. She is heavy with foal, but is in a very good condition."

ANSWER:—What you complain of is due to the presence of either worms or bots in the rectum. Inject some raw linseed-oil, a pint at a time, into the rectum. Repeat this a few days in succession.

Chronic Cough.—W. P., South Troy, Minn., writes: "We have a colt which has had a cough ever since she had the distemper, when she was nine months old. She will soon be three years old. It seems to be a dry, hacking cough. When she runs and plays she will cough. What is it, and what can I do for it?"

ANSWER:—The chronic cough you complain of, very likely, is due to permanent morbid changes, produced and left behind when the animal was sick with what you call distemper, and therefore incurable.

A Lame Cow.—I. T., Hillsdale, Mich., writes: "I have a cow ten years old that has been very lame the past three months in her right hind leg. She can hardly walk, and is getting poor. She is a valuable cow. Can't see what is the matter. I supposed it was in her hoof, but think now it is in her hip."

ANSWER:—You have altogether too much confidence in my ability when you expect me to tell you what to do for your cow on your simple statement that she has been very lame for three months, not knowing yourself whether the lameness is in the hip or in the hoof. Have her examined by a veterinarian.

Lateral Opening in Cow's Teat.—E. J. T., Neptune, Ohio, writes: "The right back teat of one of our cows has an opening at the side. All the milk is drawn out. How far up on the inside the opening extends I cannot say, but on the outside is about an inch from the end. The cow gives about a quart of milk at a milking."

ANSWER:—If you desire to have the opening in the rudimentary teat closed, you may canterize the same with a piece of lunar caustic, and you probably will succeed.

Cough.—J. H. W., Quincy, Mass., writes: "I should feel much obliged if you can tell me what I can do for a horse troubled with a cough. So far as I can find out, he has had it for two years. He coughs mostly in the stable—a dry, hard cough, something like a man with asthma."

ANSWER:—I have stated time and again that a diagnosis cannot be based upon a simple symptom, especially if the same, like coughing, is common in a good many diseases. Maybe your horse has heaves; at any rate a chronic cough of two years' standing must be considered incurable. Look up the answer given to inquiries headed "Heaves."

Influenza.—C. K. F., Frost, Ohio. Your friend's horse was affected with influenza, a very common disease, and just now very prevalent in Ohio. The same night, and very likely would have recovered, if it had been exempted from work as soon as it was found to be sick, and if, in the absence of a veterinarian, no treatment whatever except good care and wholesome diet had been applied. Smoking with burning leather, tar, feathers, etc., is enough to make a healthy horse sick, and to give linseed-oil or any other oil or fat to a horse that can hardly breathe is almost invariably sure death. No wonder that gangrene of the lungs resulted and killed the poor brute.

Possibly Milk-stones.—A. O. R., Atlantic, Pa. writes: "I have a cow that has a lump in each front teat. One teat is almost completely closed. The lumps are about one and a half inches from the end of the teat. The milk seems to be all right. She will not allow the affected teats milked with as much freedom as she will the others. She has her second calf, but she had the lumps in her teats when she was dry."

ANSWER:—The "lumps" you complain of may be milk-stones. Whether they are or not is best ascertained by careful probing with a fine metallic or whalebone probe, introduced into the teat. If they are milk-stones, and

cannot be squeezed out through the opening at the ends of the teats, they can be removed only by an operation, to be performed by a veterinarian.

Ringbone.—G. A., Anacostia, D. C. The ringbone you describe probably constitutes the cause of the lameness; still, the treatment you bestowed upon your horse, first a severe blister, very likely applied all around, then the poulticing until the frog showed decay, then the cutting down of the heels, so as to throw nearly all the weight upon the weakened frog, navicular bone, tendons and ligaments, is enough to cause lameness in almost any horse. You now propose to put on a shoe with "high heels," probably meant for "high corks." This is just about the same as if one makes himself a wound solely for the purpose of applying a bandage. It would have been far better if the frog had not been caused to decay by moisture, dirt and poultices, and if the heels had not been cut down. I advise you to have your horse shod by a horseshoer who understands the anatomy and mechanism of the horse's foot, and in regard to his lameness, to have him examined by a competent veterinarian.

Lame and Troublesome Horse.—E. G. S. W., Claremore, Ark., writes: "Please tell me what to do for a horse that goes lame in his fore foot at times, and at times rests his toe on the ground. He don't want you to handle his foot; will kick with his hind foot when you undertake to raise it, and will pull the foot out of your hand. The horse is hard to shoe. I think the lameness is caused by some disease of the foot, as I can locate it in no other place."

ANSWER:—The bare fact that your horse is lame don't convey to me any idea as to the nature and the seat of the lameness; I therefore cannot possibly tell you what to do. If your horse is troublesome and don't want you to touch his feet, treat him with patience and kindness, and thus convince him that you do not intend to do any harm, or cause any pain. Brute force usually makes such cases worse, especially if the horse knows that the persons who handle him are afraid. If patience and kindness are of no avail, apply to a professional horse-tamer.

Peritonitis, etc.—N. W. P., Catharpen, Va., writes: "A few days since I lost a Poland-China boar with the following symptoms: First, an appearance of stiffness and weakness of the hind quarters, followed by loss of appetite and general weakness. This was quickly followed by straining efforts, as if to evacuate the bowels or bladder, which continued till death. He was sick about seven days. A post-mortem investigation showed the rectum and small intestines empty. The bladder contained about a quart of urine, and with the urethra was much engorged with blood; a section of the small intestine high up also showed an inflamed condition of its coats. Can this be a case of cholera, or swine-plague? I am a novice at hog raising, and should be pleased to have your views on the case."

ANSWER:—I cannot answer your question, because it does not appear from your communication whether the post-mortem examination or the morbid changes were limited to a portion of the intestines, the bladder and the peritoneum. Symptoms and morbid changes, as far as communicated, show cystitis, enteritis and peritonitis, but nothing very characteristic of swine-plague.

Cause of Splints.—B. T. V., Paris, Texas, wishes to know the cause of splints and the best methods of curing them. Splints are usually caused by an unequal distribution of weight in the knee-joint, if thereby too much weight is thrown upon the head of the inner splint-bone. That this is the case is evident to everyone who is familiar with the anatomy of the fore-knee, while to one who is not, almost any amount of explanation would be useless. A splint or an exostosis on the inner small metacarpal, or splint-bone, may also be caused by a severe bruising, brought about by external violence; for instance, by interfering, if the horse has very high action. In either case the best treatment consists in removing the causes. In the one case the weight may be somewhat shifted from the inside of the knee-joint to the outside by judicious shoeing, and in the other the interfering has to be prevented also by proper shoeing. If the bruising has just been done and the bruised parts are inflamed and swollen, the inflammation may be reduced by strict rest and frequent applications of cold water. After the inflammation has disappeared, the swelling may be reduced by proper bandaging, but it can never be entirely removed.

Stiff and Affected with Vertigo.—Wood-eaters.—E. J. M., Creston, Neb., writes: "I have a horse about twelve years of age, which is stiff in the shoulders. He has staggering spells, which came on him about a month ago. At times he almost falls down. When he has these spells he reels and tosses his head to one side and throws his ears forward. He is a very hearty eater, and in good condition."

I also have some yearling colts running in pasture that gnaw the fence. They have gnawed the boards. I took a wire and put it on top of the fence and they made for another string of fence. I did the same thing there, and now they go up and down the fence to find a place to gnaw. The boards are pine."

ANSWER:—The stiffness of your horse is

probably due to overwork, exposure and, maybe, old age, and therefore permanent. A little improvement may be effected by a run at pasture, provided the horse is not older than you state. Vertigo, also, must be considered incurable. An attack sometimes is shortened if a cloth is thrown over the horse's head when the attack is coming on.—As to your yearling colts, if their food is not defective or lacking essential constituents, the wood-eating may only be a bad habit, which, perhaps, is best broken if the fences are tarred.

Diseased Colts.—J. G., Idaville, Indiana, writes: "Have lost two young colts from constipation. One colt was found, when twenty-four hours old, lying apparently in a deep sleep, from which it could not be aroused. After remaining in this condition for a few hours it began to struggle and plunge about, and had it not been held it would have killed itself. A passage was finally secured by using injections. It became quiet soon afterward, and swallowed milk which was given it; became weaker gradually, and died. The other colt was two weeks old when attacked. Symptoms about the same, except that it lived several days, alternately quiet and convulsed. In such cases what should be done to cause an evacuation, and what other treatment is best? Would you vary the treatment for colts of different ages?"

ANSWER:—The colts, very likely, were diseased when born, and the constipation you complain of was only a symptom. Hardly anything could have been done. If new-born animals suffer from constipation, pure and simple, or, in other words, have difficulty in getting rid of the meconium or first wax-like dung, it is usually due to the fact that they have not received the first milk of their dam, which has a laxative effect. Such a constipation is usually removed by the introduction of a soap-pill into the anus.



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Our Miscellany.

UNEASY lies the head that lacks a crown.

A MAN is known by the company his daughter keeps.

THE Ecuador commissioners have had constructed a facsimile of the famous palace of the Inca Perca, the ruins of which stand near the city of Quito, and will exhibit it at the world's fair.

WHAT is most calculated to discourage a young man of high moral notions, however practical he may be, is the fact that he is generally measured by what he can get, not by what he can earn.

A DEEP-SEATED COUGH, cruelly tries the Lungs and wastes the general strength. A prudent resort for the afflicted is to use Dr. D. Jayne's Expectorant, a remedy for all troubled with Asthma, Bronchitis, or any Pulmonary affection.

CHILI will be represented at the world's fair, regardless of the fact that its government made no appropriation. Leading manufacturers of that republic have organized and appointed A. Thompson Rei to represent them as commissioner at Chicago. Mr. Rei was at headquarters recently securing space. He said the prospects for a creditable exhibit are good. In his application for space was included 2,000 square feet for a nitrate exhibit.

THE French government has consented that plaster casts be made for the world's fair of the numerous art treasures of the Trocadero, Paris. The exposition authorities will bear the expense, which will be something above \$25,000. The collection will be a very fine one and will occupy a conspicuous place in the fine arts building. After the fair the collection will be placed in the projected Chicago museum, where, it is believed, it will prove of great benefit to American artists and of much interest to visitors.

THE sacred fires of India have not all been extinguished. The most ancient which still exists was consecrated twelve centuries ago in commemoration of the voyage made by the Parsees when they emigrated from Persia to India. The fire is fed five times every twenty-four hours with sandal-wood and other fragrant materials, combined with very dry fuel. This fire, in the village of Oodwada, near Bulsar, is visited by the Parsees in large numbers during the months allotted to the presiding genius of fire.

THE New York world's fair board has visited Chicago, inspected the exposition grounds and buildings and inquired carefully into the progress of the work of preparation for the great fair. The members of the board expressed their astonishment and enthusiasm over the magnificent buildings, and the vast amount of work that has been accomplished. They said that New York will now bend all its energies to be creditably and splendidly represented, and that hereafter there will be no ground for accusing that state of lukewarmness.

SWISS women are now arranging to be represented in the women's building at Chicago. One of the professors of the university at Geneva, commissioned by the board of lady managers for the purpose of organizing a Swiss committee, according to Mrs. Potter Palmer's instructions, has convoked a meeting for this purpose at Berne. The idea of taking part in the exposition has been welcomed, and a committee is now being formed with Miss Gabrielle Neville, of Geneva, as president. Miss Neville is particularly well qualified for such a task. She is a sister of the celebrated Egyptologist of Geneva.

VISITORS to the Columbian exposition will be able to go comfortably and expeditiously from one part of the grounds to another and obtain advantageous views of the buildings. They may do this either in electric boats through the lagoons, or by the intramural elevated electric railway. The contract for the latter has been awarded. There will be five miles of double track and stations at convenient points. The route, as mapped out, runs from one end to the other of the grounds in a sinuous course. The fare will be five cents, and the capacity of the road about 20,000 an hour.

IN order to show the quality of silk produced in the state, and the skill attained there in the silk industry, the women of the Southern California Silk Association will make an artistic banner especially for exhibition at the world's fair. The banner will be home-made in every respect, and also hand-made, even to manufacturing the fabric. It will show designs of California flowers, fruit and scenery, and in artistic design and finish, it is believed, will attract much attention. Many expect that the silk industry will become one of the leading ones of southern California.

TOO HISTORICAL.

"I'm thinking of getting up a fancy-dress ball, at which all the guests would have to appear in the costumes worn by the founders of their families. Wouldn't it be picturesque?"

"Hardly. There wouldn't be anything very picturesque about a lot of bricklayers and butchers and innkeepers."

The Farm Implement Directory is on page 4 of this issue.

A WIFE WORTH HAVING.

A good story is told of a certain man in Franklin county. He one day told his wife that he would give her all the silver pieces she found in his wallet that were coined in the year she was born.

As a result, the lady in due course of time had quite an amount of silver money on hand; so much, in fact, that she went to the bank and deposited it in her name. Then, speaking to the cashier, the lady said:

"My husband tells me you are going to pay him some money to-day. Won't you please pay him in this silver I have just deposited? I will be so much obliged to you if you will."

Of course the cashier, being noted for his courtesy to the ladies, quickly replied that he would be happy to please her.

As a result, the lady has still more birthday money.—Bangor Commercial.

NERVE ENOUGH.

He walked into a Chicago newspaper office and took a seat.

"Are you the manager?" he asked, briskly.

"What can I do for you?" replied the newspaper man in a noncommittal tone.

"I'm a patent medicine manufacturer. Your paper has a wide circulation, hasn't it?"

"Wide!" the newspaper man swung around in his chair. "Wide! I should say so. We have a circulation greater by two to one than any other paper in the state—a sworn circulation, sir, of 100,000 copies daily, and it's a paid circulation too, and we reach the families, sir. Our paper is read by 500,000 people every day, and when you consider that our advertising rates are—well, they're so low that we are going to advance 'em fifty per cent right after the first. I don't exaggerate in the least, sir, when I say that we offer positively the best advertising medium in the United States. Why, you can see for yourself what the result must be from an ad' placed before 3,500,000 people every week and—where are you going?"

"Oh, 'round town a little," replied the stranger, putting on his hat. "The article I make is a nerve medicine, and I came in to sell you a bottle, but I see you don't need it."—Detroit Free Press.

FRUIT AND STOCK FARM FOR SALE.

550 ACRE FARM, located in half mile of depot, with good orchards, bearing vineyards, 25 acre fish pond, well stocked with fish, from nothing to 10 feet deep and supplied with five good springs. A large barn and wine cellar, and a good two-story residence, and two tenant houses. 250 acres improved and well cross-fenced. More natural advantages than can be found on any farm of same size in Texas. For sale, or trade for a neat, clean stock of Dry Goods, Clothing, Shoes, Hats, etc. Address, R. G. Campbell, Winnsboro, Wood Co., Texas. Mention where you saw this advertisement.

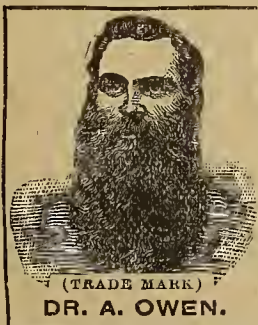
GOLD RINGS FREE!!
We will give one half-round Ring, 18k Rolled Gold plate and warranted, to anyone who will sell 1 doz. "Indestructible" Lamp Wicks (need no trimming) among friends at 10cts. each. Write us and we will mail you the Wicks. You sell them and send us the money and we will mail you the Ring.
STAR CHEMICAL CO., Box 44, Centerbrook, Conn.

A CHANCE TO MAKE MONEY.

I have berries, grapes and peaches, a year old, fresh as when picked. I use the California Gold Process; do not heat or seal the fruit, just put it up cold, keeps perfectly fresh, and costs almost nothing; can put up a bushel in ten minutes. Last week I sold directions to over 100 families; anyone will pay a dollar for directions, when they see the beautiful samples of fruit. As there are many people poor like myself, I consider it my duty to give my experience to such, and feel confident anyone can make one or two hundred dollars, round home, in a few days. I will mail sample of fruit and complete directions to any of your readers, for 13 two cent stamps, which is only the actual cost of the samples, postage, etc., to me. I ask nothing for the directions.
Mrs. William Griffith, New Concord, Ohio.

THE OWEN ELECTRIC BELT AND APPLIANCES FOR MEN AND WOMEN

CURE
MANY
DISEASES
WHEN
ALL
OTHER
REMEDIES
FAIL.
GET ONE.



(TRADE MARK)
DR. A. OWEN.

TO
UP THE
SYSTEM
AND
RESTORE
LOST
VIGOR.
TRY
ONE.

A GENUINE CURRENT OF ELECTRICITY
Is generated in a battery on the belt, and can be applied to any part of the body. The current can be made mild or strong as the case may require, and is absolutely under control of the wearer at all times.

OUR ILLUSTRATED CATALOGUE
Contains fullest information regarding the cure of Acute, Chronic and Nervous Diseases, Sworn Testimonials with portraits of people who have been cured, Price List and Cuts of Belts and Appliances, and how to order, published in English, German, Swedish and Norwegian Languages. This Catalogue, or a Treatise on Rupture Curd with Electric Truss, will be mailed to any address on receipt of six cents postage.

THE OWEN Electric Belt and Appliance Co.

Main Office and Only Factory,
THE OWEN ELECTRIC BELT BLDG.
201 to 211 State St., Cor. Adams.
CHICAGO, ILL.
New York Office, 826 Broadway, Cor. 12th St.
THE LARGEST ELECTRIC BELT ESTABLISHMENT
IN THE WORLD.
Always mention this paper when you write.

DOWN GO THE PRICES

on Guaranteed Genuine

ELGIN AND WALTHAM

Watches

TO OUR SUBSCRIBERS ONLY.

The manufacturers of these celebrated watches, the Best in the World, have recently made big reductions in their prices, but many dealers continue to sell them at the old prices and pocket the additional profit. We believe that the benefit of the cut in prices should be given to the purchaser, and also knowing that many of our readers live where a good stock is never kept, we offer to our subscribers only any of the watches described below and give to them the advantage of the reduced prices, and also save them the middleman's profit. We offer only the genuine Waltham and Elgin, and guarantee them to be just as represented. Every watch sent out will be regulated and inspected, and only perfect goods will be mailed. When the watch is received, wind and set it carefully, and if not in perfect order write to us within three days, giving your grounds for complaint.

We will Make Everything Satisfactory or Refund the Money.

We do not guarantee these prices for any number of days. They may advance at any time. Order now, while they are at the bottom. The following are the best and most popular watches of both makes, from which to make your selection:

IN ORDERING BE SURE to state the number of the offer, whether you want Elgin or Waltham, and give the price, that we may understand clearly just what you want.

No watches will be sent C. O. D., for we guarantee satisfaction or refund the money.

If you are not a subscriber to either the Farm and Fireside or Ladies Home Companion, send 50 cents in addition to your order, which will pay for one year's subscription to either paper and entitle you to a subscriber's privilege of purchasing as many watches as desired.



Offer No. 356. Hunting Case Gold Watch, \$14.35
This is a magnificent gold filled hunting case watch, gentlemen's size, with Waltham or Elgin works, seven jeweled and all improvements, including expansion balance, plain regulator, etc. This watch sells readily for \$35.00. Remember, that our offer is for the benefit of subscribers only. The case is guaranteed by the manufacturers to wear for fifteen years just like solid gold. Price to our subscribers only, by registered mail, \$14.35.

Offer No. 354. Waltham or Elgin, \$5.50.
Gentlemen's size, with seven jewels. Compensation balance and safety pinion, stem winding and setting, and all the latest improvements. The case is solid nickel-silver that will always hold its color, open face, with plate-glass crystal heavy enough to stand any strain. The usual price of this watch is from \$8.50 to \$12.50. Price to our subscribers only, by registered mail, postpaid, only \$5.50.

Offer No. 355. Open Face Gold Watch, \$12.
Gentlemen's size, Waltham or Elgin, open face watch, stem wind and set, seven jewels and all improvements; gold filled case that is guaranteed to wear for fifteen years. An accurate time-piece that looks just like a \$100.00 solid gold watch. Watch clubs have been selling this watch for \$30.00. Price to our subscribers only, \$12.

Offer No. 357. Full Jeweled Watch, Only \$10.
A genuine Waltham or Elgin, fifteen jeweled watch, gentlemen's size, containing all the great patents, such as compensation balance, safety pinion, stem winding and pendant setting apparatus, breguet hair-spring hardened and tempered in form, patent regulator, etc. Cased in heavy nickel-silver case, open face, like that mentioned in offer No. 354. The movement alone in this watch usually sells at \$12.00 to \$15.00. We send the complete watch to our subscribers only, postage prepaid, for only \$10.

Offer No. 358. Full Jeweled Gold Watch, Open Face, \$15.50.

This is a fifteen-year guaranteed gold filled case, containing a fifteen jeweled movement, with all improvements mentioned in offer No. 357. The case is beautifully engraved and is made by placing two plates of solid gold over a plate of fine composition metal. The case is stiffened by the composition metal, and is much stronger than a solid case. It cannot be recommended too highly, yet the price to our subscribers is only \$15.50.

Offer No. 359. Full Jeweled Hunting Case, \$18.50.

The same watch as offer No. 358, except this has hunting case.

Address FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio.

Offer No. 360. Gold Watch, Ladies' Size, \$13.50.
This watch, either Waltham or Elgin, is a ladies' size, hunting case, engraved, seven jeweled movement; the case being warranted by the manufacturers to be standard and to wear for at least fifteen years. Any lady in the land would be proud to own such a watch. It is a true time-keeper, and usually sells at from \$18.00 to \$25.00. Any subscriber getting one and wishing to sell it at any time should get at least \$20.00 for it. Price to our subscribers only, by registered mail, only \$13.50.

SOLID GOLD WATCHES.



Special offer No. 361.

Ladies' Solid Gold Watch, Hunting Case, Only \$17.25.

This is a solid gold Waltham or Elgin watch, neatly engraved, hunting case, ladies' size. Contains 7 jewels, compensation expansion balance, safety pinion, stem winding and pendant setting apparatus, and all the improvements. The case is a celebrated "Brooklyn Granger." We will send this little beauty, delivery guaranteed and prepaid to our subscribers, for only \$17.25.

Gentlemen's Solid Gold Watch, Only \$25.

Grand Special Offer No. 362.

A magnificent Waltham or Elgin watch, containing eleven jewels, compensation balance, safety pinion, stem winding and setting apparatus and improved regulator. The case is solid gold, either hunting or open face, and a celebrated "Double Stock." Brooklyn Granger. Sent to our subscribers only, postage prepaid, for \$25. This is a grand bargain.

BEST WALTHAM MOVEMENT.

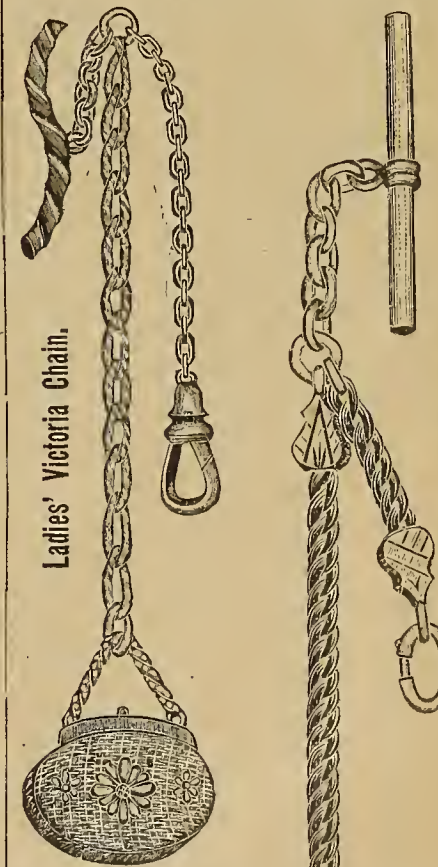
15 Ruby Jewels in Gold Settings.

Crescent Street, Nickel; Compensation Balance, Adjusted to Temperature, Isochronism and Position; Patent Regulator; Patent Breguet Hair Spring, Hardened and Tempered in Form; Fine Glass Enamel Double Sunk Dial; the finest Full Plate Movement in the world. The above Waltham works will be delivered free to subscribers in the cases described below, at the following prices:

No. 368.—In solid 14k. gold case, weighing from 40 to 45 dwt. hunting or open face, \$60.
No. 369.—In gold filled case, guaranteed to wear 15 years, open face, engraved, \$31.
No. 370.—In gold filled hunting case, guaranteed to wear 15 years, engraved, \$33.50.
No. 371.—In solid nickel silver case, dust-proof, open face, \$24.60.

Remember, you get exactly the same works in the nickel silver case that you do in the solid gold case.

This is a great feature, because a man can purchase the watch in nickel case and afterward have it put in a gold case, if he wishes to do so.



Ladies' Solid Gold Victoria Watch Chains.

No. 377.—Solid Gold, \$7.50.
No. 375.—Solid Gold, \$6.
No. 376.—Solid Gold, \$6.

These Chains cost from \$10.00 to \$15.00 at retail.

Gentlemen's Chains.

No. 363.—Curb chain, filled gold, warranted for 20 years, \$6.
No. 364.—Curb chain, gold plate, warranted for 10 years, \$3.50.
No. 365.—Trace chain, filled gold, warranted for 20 years, \$6.
No. 366.—Trace chain, gold plate, warranted for 10 years, \$3.
No. 367.—Aluminum chain, with coin silver swivel, handsome as silver, light as paper, strong as steel, \$1.50.
No. 452.—Curb chain, rolled plate gold soldered, \$2.35.
No. 453.—Trace chain, rolled plate gold soldered, \$1.50.

Smiles.

A TANK DRAMA.

A little boat,
Serene afloat,
Upon the moonlit water;
A nice young man,
Of modern plan;
An old gent's pretty daughter.

Awhile he rows
Midst lanchant glows,
Along the laughing water;
He hugs the shore
Awhile—and more:
He hugs the old gent's daughter.

—Outing.

THE FATE OF A POEM.

I wrote a pastoral last spring,
When all such verse was ripe;
A daily paper took the thing
And set it up in type.
But then a bungling typo came
And jumbled up the lead;
They quickly set it up again,
But this is how it read:

The birds await the milkmaid's hand,
The cows sing in the trees,
The sail-boats cleave the wave-capped land,
The plowshare breaks the seas.
The rising sun sinks in the east,
The moon climbs o'er the hill,
And in its nest the downy beast
And mighty bird are still.

THE ADAPTABLE POEM.

They stood beside the open grate
(For summer substitute a gate),
She was a blonde (if you prefer,
Why, make a brunette out of her).
Ho spoke of love (they all do that),
And she? Her heart went pit-a-pat;
The speed, why you yourself can fix,
From seventy up to ninety-six.
She hung her head, she blushed, she sighed,
She laughed, or possibly she cried,
Just take your choice and have her do
Precisely as you wish her to.
She did etcetera until
Her George, or Jack, or Jim, or Will,
Or any name you like the best—
But why go on? You know the rest.

—Tom Masson.

TWO KINDS OF GIRLS.

Her pink little fingers are pricked and scarred,
Yet, I love to see them fly.
I know they would never have been so marred,
If the needle could use its eye.

And I love to watch her delicate frowns,
As she strikes an awkward hem;
For Rose is a girl who can make her gowns;—
There are girls whose gowns make them!

—Harry Romaine, in Puck.

DON'T WANT A THERMOMETER.

"Can I sell you a thermometer to-day?" inquired a young man at the back door of a farm-house.

"What's them?" demanded a hoarse voice from the echoing corridors of a large kitchen, and the manipulator of the voice loomed up in his shirt sleeves.

"Thermometers," answered the youth.

"What are they good for?"

"They indicate the temperature."

"What temperature?"

"The temperature of the atmosphere where they are located."

"Reg'late the weather, eh?"

"No, they don't exactly regulate the weather, but they indicate it. In other words, they tell you just how hot or cold it is by easy reference to a graduated scale running from forty degrees below zero to far above boiling point."

"Say, confound your pictures, don't you s'pose we know when we're cold and when we're overheating ourselves?"

"Certainly, but then—"

"What in thunder do we want with a thermometer? Don't you s'pose if I was cold now I'd put on my coat? Mebbe you think I haven't got a coat. Even if I hadn't got a coat couldn't I sell a two-year-old and get me one?"

"Yes, certainly, but that is not the idea. You know some seasons are hotter or colder than others, and oftentimes it is a satisfaction to know just how much they vary."

"Well, darn your hide, ef I'm too warm—ef cunny of us is too warm—can't we peel ourselves, can't we shuck off every last rag and go in swimmin'? Come, now, what do yer say to that, eh?"

"But there are other uses for a reliable thermometer. You make butter, do you not?"

"Yes, sir, we chnrrn onct a day, reg'ler. We've made butter afore you was weaned."

"Yes, well, you may not have noticed it, but butter never comes until the cream has reached a certain temperature. By the application of one of these thermometers you can readily ascertain the exact temperature of the cream, and—"

"And let Bob stand around the room idling away time, waiting for Jersey cream to heat up. No, sir, it won't go down, that kind of argument won't. Bob's hired to work, not watch a scientific rattletrap, and when the butter don't come I say, 'Bob, you keep on churnin',' and he shakes her up for all that's out. No, we don't want none of yer thermometers. We hain't got no use for 'em."

You'd better go hum and go to work, young man, afore you git too cranky for this world. I shouldn't be a bit surprised to see you 'round next summer with some kind of a contraption to tell us to go in when it rains. Sure you havn't got something to tell us when it's sundown?"

A BOY'S COMPOSITION.

In a public school in New England the teacher thought she would give out natural history subjects as subjects for composition. In this way she teaches them English orthography and natural history all at once. The commonplace subject of "Ants" was given to a bright boy who said he knew all about it. This is the result of his efforts:

ANTS.

There is many kinds of Ants My ant Mary Jane is one of these klud. She is genly good natured and when she comes to see My Mother she brings me five cents worth of penuts and tells me Why James how you've groved but when I go and see her and don't only just wank on the Carpit without Cleening my boots she is orfly mad.

Ants like to give you Advice and scold at you like everything but their Hart is in the Wright Plaiice and once I found a Ants nest in the woods I poked it with a stick and a Million Ants run out after me and Crawled up Inside my Pants and Bit me like Sixty.

Ants nests are good Things not to Poke with a stick Ants are very industryous in Steeling Shugar.

I forgot to say that my Ant Martha lives in Main she has a boy of Just about my Aige and He can stand on his Hed Five minits and how Do you suppose he can Dó it.

I Do not think of Anything more about Ants at present.

ENGLISH AS SHE IS "SPELT."

I was in one of our schools the other day where I picked up the following thrilling composition written by a twelve-year-old girl, says a writer in the *Northwestern Magazine*, which is one of the best pieces of English as she is "spelt" that I have yet seen:

"A right suite little buoy, the son of a kernol, with a rough round his neck, flue up the road as quick as a deer. After a thyme he stopped at a house and wrung the belle. His tow hurt him, and he kneaded wrest. He was tow tired to raze his fare, pail face, and a feint mown of pane rose from his lips.

"The made who herd the belle was about to pair a pare, but she through it down and ran with all her mite, for fear her gussd would not weight; but when she saw the little won tiers stood in her eyes at the site.

"Ewe poor dear! Why do you lye here? Are you dyeing?"

"No," he said, 'I am feint.'

"She boar him in her arms, as she aught, to a room where he might be quiet, gave him bread and meet, held a cent bottle under his knows, untied his choler, rapped him up warmly, gave him a suite drachm from a viol, till at last he went fourth, as hall as a young hoarse."

A MENDACIOUS SPIRIT.

The other night a reckless Denver skeptic attended a Spiritualist materializing meeting, says the *Colorado Sun*, and in the course of the evening, assuming to be of the faithful, he sought an interview with his father. The medium being willing the father appeared. This conversation followed: "How are you, father? Are you happy in the spirit world?" "Yes, my son, very happy." "And how is my poor, dead sister Jane?" "She, too, is contented and happy." "And is poor brother Jim happy too?" "Yes, my boy, he enjoys the spirit world." There was a moment's silence, when the skeptic broke out with: "What makes you lie so, father? I never had a sister Jane or a brother Jim. As a truthful spirit you're not in it." This broke up the meeting.

SHE WOULDN'T BE ALONE.

A female teacher in a New York school was on very intimate terms with a male teacher in the same school. He was in the habit of strolling into her room during the recess and chatting with the object of his affections. His name was Smith. One day the lady teacher endeavored to make the class comprehend the omnipresence of God. She explained to them that God was everywhere. "Now, my dear children, suppose you all go out of this room except myself, and I stay in here alone?" asked the female teacher. "No," exclaimed one of the little girls, "you will not be alone, for Mr. Smith will be with you."—*Texas Siftings*.

NOTHING LIKE A GENEROUS HUSBAND.

She was a sweet, inoffensive-looking woman, one of that class who are everywhere regarded as model wives. She was evidently going on a journey, for as she was about to get into the railroad-car she remarked in a hesitating voice to the man, evidently her husband, who had come to see her off:

"Don't you think, James, I shall need some money while I am away?"

With a look of surprise, he replied:

"Didn't I give you a half dollar last week?"

—Boston Transcript.

Don't make a big fire on wash-day and fill your house with steam, but try the new way, without boiling (see page 7). It will not cost you anything to try it, and Monday will no longer be the dreaded day of the week.

LADIES WHO WILL DO WRITING

The tremendous sale of my preparation, Gloria Water, has so increased my correspondence that I will guarantee good wages to ladies who will do writing for me at home. Address in own handwriting MISS EDNA L. SMYTHE, Box 1101, South Bend, Ind. Mention paper.

WILL MAKE GOOD WAGES.

CARDS

500 New Samples of Silk Ribbon, Silk Fringe, Envelope & New Rosette Cards, Trills, Songs, Games, etc., 1 Album, 1 Pack Escort, 1 Pack Acquaintance Cards, all for 2c. Clinton Card Co., Cedar, Ohio.

CARDS

WE LEAD IN LATEST STYLES AT LOWEST PRICES. FANS, BASKETS, LACE EDGE CARDS, Etc., 5c. FLES 2c. CLINTON BROS., CLINTONVILLE, CONN.

500 SCRAP

PICTURES, AUTO, VERSES & RIDDLES. 20 STYLES OF CARDS 2c. A PRESENT PARDES & CO., MONTWESS, CONN.

YOUR

NAME ON 20 Silk Fringe, Envelope, Gold Bezel, Envy Shape and Acquaintance Cards (all new), 1 Album, 1 Pack Escort, 1 Pack Acquaintance Cards, all for 2c. CLINTON CARD CO., CADIZ, OHIO.

LOVELY

SAMPLE CASE OF NEW CARDS. 20 STYLES OF CARDS 2c. A PRESENT TITTLE CO., NORTH HAVEN, CONN.

CARDS

LATEST STYLES, FINEST GOODS, LOWEST PRICES. BEST PREMIUMS. SAMPLES JEWEL CARD CO., CLINTONVILLE, CONN.

YOUR NAME

ON 25 LATEST STYLE CARDS. 1 Auto. Album, 375 Album, 1 Ring, 1 Pocket Pencil, 1 Fountain Pen, 1 Initial Handkerchief, STORY PAPER 3 MONTHS, and Agent's New Samples, all for 10c. CLINTON & CO., North Haven, Conn.

YOUR NAME

ON 25 Lovely Cards, 1 Ring, 1 New Fountain Pen, Scarf Pin, Watch Chain, Collar Button, Cuff Buttons, and our new POPULAR MONTHLY 3 mos., all for 10c. & 2c. for postage. CLINTON BROS., CLINTONVILLE, CONN.

YOUR NAME

ON 25 ENAMELED ELITE CARDS (new). 20 Imported Ornaments, 12 PENS, 1 Chain, 1 Lace Pin, 1 Ring, with our popular STORY PAPER 3 months. Samples 2c. LAUREL CARD CO., CHANTONVILLE, CONN.

YOUR NAME Printed on

25 Silk Fringed, Floral Cards. 1 Auto. Album, 1 Fountain Pen, 1 Lace Pin, 1 Auto. Album, 475 Pictures, Verses, Ac., Agents' Complete Outfit, all for 10c. IVY CARD CO., BARDEN, CONN.

RING

The Globe Card Co. has always been noted for promptness in filling orders and for excellence of cards and premiums. This year to introduce our goods to many new customers, we make a grand crowning offer: For 10 CTS. we will send 12 lovely Hidden Name Cards, name on, 1 Magic Name Revealer, 1 Oracle of Kismet (answers all questions), a large lot of Album Vases and Comandras, Ac., and complete outfit, all for 10c. Don't confound this ring with the brass ones sold by many card printers; this is GENUINE ROLLED GOLD plate warranted 1 year. We lose money on this offer, but hope thus to introduce our excellent goods to many new customers. GLOBE CARD CO., Box 23, Centerbrook Conn.

Ohio Electric Co., Cleveland, want agents. Cat. free.

RUBBER STAMPS.

Best made. Immense Catalogue Free to agents. The G. A. HARPER MFG. CO., Cleveland, O.

WATCH FREE—If you want one send a stamp to the

National Illus. Magazine, Washington, D. C.

6th and 7th Books of Moses, Alburnus Magnus,

Long Lost Friend, Mineral Rods and Dip Needles. B. G. Stauffer, Bachmanville, Pa.

\$5

A DAY SURE. \$2.15 Samples Free. Horse owners buy 1 to 6. 20 other specialties. E. E. BREWSTER, HOLLY, MICH.

SALESMEN

WANTED TO HANDLE GREATEST NOVELTY PATENTED EXCLUSIVE TERRITORY. SELL AT EIGHT PARTICULARS FREE. SAMPLE 50 cts. Address UNITY DOOR CLOTH CO. Dept. 65 UNITY BLDG. CHICAGO, ILL.

AGENTS WANTED ON SALARY

or COMMISSION, to handle the New Patent Chemical Ink Erasing Pencil. Agents making \$50 per week. Monroe Eraser Mfg Co. x98, LaCrosse, Wis.

CUT IN TWO

Prices of Sewing Machines. Safes, Scales, Blacksmith's Tools, Road Cars, Buggies, Harness and all other things. List Free. CHICAGO SCALE CO., CHICAGO, ILL.

BICYCLE

TO BOYS AND GIRLS UNDER 18. 1 YEAR AGE ON LAST CONDITION. WITHOUT ONE CENT OF MONEY. Western Pearl Co., 334 Dearborn St., Chicago, Ill.

WANTED—Women to take crochet work to do at home.

City or country. Steady work. Particulars on application. L. WHITE & CO., 209 State St., Chicago, Ill.

WANTED Agents and canvassers to sell

our new book, "Common Sense in Business Matters." It sells at sight. VOORHEES & RUDD, Blue Island, Ill.

BEST

PAYING THING FOR Agents is our PHOTOGRAPH FAMILY RECORD PICTURE. We give you liberal terms. Address Dept. IV C. P. CORY & CO., 51 & 53 Jefferson St., Chicago.

Be sure to mention this paper when you write

"COLUMBUS MEMORIAL" 400 years progress. Grand Panorama World's Fair Buildings. A bonanza for agents. Retail price 50 cts. Sample by mail 35 cts. JOHN W. LITTE & CO., 106 Wabash Ave., Chicago.

A LADY WANTED

In each locality to manage Toilet Parlor at home; write, obtain names, send circulars. \$5 to \$15 weekly. Our Toilet Art Book Free. Send Stamp. SYLVAN TOILET CO., Port Huron, Mich.

MANAGERS WANTED

Everywhere to take charge of our business. Advertise, distribute circulars & employ help to sell goods. WAGES \$50 to \$125 PER MONTH. Expenses advanced. State experience. Wages expected, also your preference for home work or traveling. SLOAN & Co., Mfrs. 294 George St., Cincinnati, O.

CUT THIS OUT

and send with your name and express office address and we will send you free to examine and wear, a SOLID GOLD D and watch the you can sell for Ten Dollars. If it suits, you send us Four Dollars and express charges; if not, return it to me. Mention whether Ladies' or Gents' size is desired. W. S. SIMPSON, 37 College Place, N. Y.

\$7.50 FOR A DAYS' WORK.

GOOD PAY! STEADY WORK IF DESIRED. Address JAMES LEE & CO., 215 Dearborn St., Chicago, Ill.

***** A PRESENT. *****

SEND us your address and we will make you a present of the best Automatic WASHING MACHINE in the world. No wash-board or rubbing needed. We want you to show it to your friends, or to a neighbor if you can. You can COIN MONEY. We also give a HANDSOME WATCH to the first from each county. Write quick. Address N. Y. LAUNDRY WORKS, 80 Murray Street, N. Y.

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The little tottering baby feet,
With faltering steps and slow,
With pattering echoes soft and sweet,
Into my heart they go;
They also go in grimy lays,
In middy pools and dusty ways,
Then through the house in trackful maze
They wander to and fro.

The baby hands that elasp my neck
With touches dear to me,
Are the same hands that smash and wreck
The inkstand foul to see.
They pound the mirror with a cane,
They rend the manuscript in twain,
Widespread destruction they ordain,
In wasteful jubilee.

The dreamy, murmuring, baby voice
That coos its little tune,
That makes my heart rejoice
Like birds in leafy June,
Can wake at midnight dark and still,
And all the air with howling fill
That splits the air with echoes shrill,
Like cornets out of tune.

TO REMOVE IRON RUST.

The following method for removing iron rust is recommended by an exchange:

Buy four ounces of muriatic acid at a druggist's. It is useful for various purposes. Have it marked plainly. It should, moreover, be labeled as poisonous.

Fill a large bowl with boiling water. Have another bowl or pan full of hot water. A bottle of household ammonia also is necessary. Place the spotted part of the garment over the bowl of hot water. Wet a cork in the muriatic acid, and touch the iron rust with it. Immediately the spot will turn a bright yellow. Dip at once in the hot water and the stain will disappear. When all the spots have been removed, rinse the article thoroughly in several waters, and then in ammonia-water (a teaspoonful of household ammonia to a quart of water), and finally in clear water. The acid is very powerful and will destroy the fabric if allowed to remain upon it. Ammonia neutralizes it. If the directions be followed carefully, the most delicate fabric can be successfully treated in this way.

RENOVATING OLD FEATHERS.

The best way to renovate old feathers is to put them from the ticks into a barrel of hot suds. They should be shaken out under the water after thoroughly washing them in two or three barrels of suds. Rinse them thoroughly. Spread them on a clean sheet on the floor in a small, warm room, after wringing them thoroughly in a cloth to extract all the moisture that can be taken out in this way. Leave them over night to dry on the sheet, then remove them to another and beat with a stick, tying a veil over the face and head to prevent breathing the fluff of the feathers that rises. In a few days the feathers will be fine and dry. They can also be dried by putting them in a bag of white mosquito-netting, hanging them in the sun and turning and beating them occasionally. If one lives near a steam renovating establishment, it is better to send the pillow there, as they only charge fifty cents a pillow to renovate them.

NIGHT-LAMPS.

No house should be without a glimmer of light at night—a light sufficient to prevent groping and stumbling about in Egyptian darkness, if one is obliged to rise. This is especially true of homes where there are little children. The idea that children are in any way benefited by being made to sleep in absolutely dark rooms is untenable. If the light be sufficiently subdued and of a sort to leave the air quite pure, it is hard to see any harm in it. Gas turned low is never safe, as the fluctuations in the meter may make it go out. An ordinary kerosene lamp turned low is at all times an abomination. Little night-lamps, costing twenty-five cents, with quarter-inch wicks, filled with pure oil and carefully trimmed, can be turned up to their full height without giving too much light or emitting any odor.

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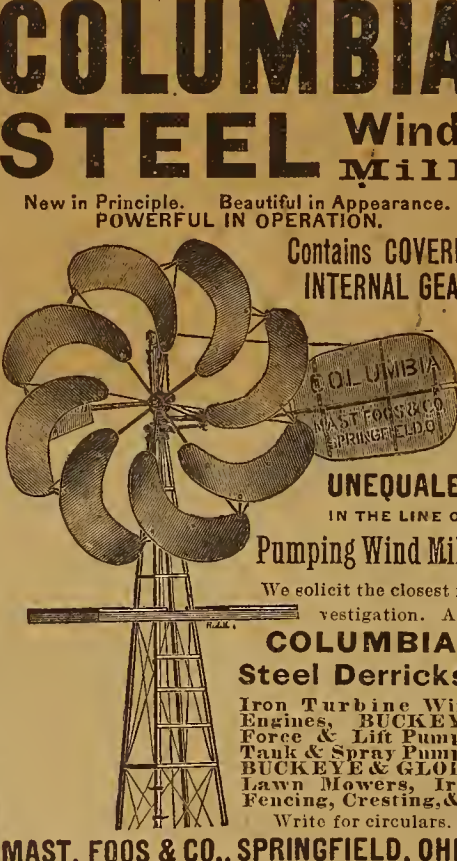


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